

Adaptive frequency-based power management for off-grid hybrid photovoltaic converters

Gonschorowsk, Ezequiel; Cardoso, Rafael; **Carvalho da Silva, Edivan Laercio**; **Stein, Carlos Marcelo De Oliveira**; Carati, Emerson Giovanni; Denardin, Gustavo Weber; da Costa, Jean Patric Eletronica de potencia 2024 / art. e202440
<https://doi.org/10.18618/REP.e202440>

Ageing of kesterite solar cells 1 : Degradation processes and their influence on solar cell parameters

Neubauer, Christian; **Samiepour, Ali**; **Oueslati, Souhaib**; **Danilson, Mati**; **Meissner, Dieter** Thin solid films 2019 / p. 595-599 : ill
<https://doi.org/10.1016/j.tsf.2018.11.043> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Ageing of kesterite solar cells 2 : Impact on photocurrent generation

Samiepour, Ali; **Neubauer, Christian**; **Oueslati, Souhaib**; **Mikli, Valdek**; **Meissner, Dieter** Thin solid films 2019 / p. 509-513 : ill
<https://doi.org/10.1016/j.tsf.2018.11.044> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Ainult enda päikesepaneelidest jääb energiakindluse tagamiseks väheks

Raig, Tanel TööstusEST 2020 / lk. 50-53 : fot http://www.ester.ee/record=b4481084*est <https://toostusest.ee/uudis/2020/09/23/ainult-enda-paikesepaneelidest-jaab-energiakindluse-tagamiseks-vaheks/>

Akadeemik : tööstuses võiks olla rohkem doktorikraadiga juhte

Mihkelsaar, M.; Grossberg-Kuusk, Maarja novaator.err.ee 2024 [Akadeemik: tööstuses võiks olla rohkem doktorikraadiga juhte](#)

An alternative chlorine-assisted optimization of CdS/Sb2Se3 solar cells : towards understanding of chlorine incorporation mechanism

Gopi, Sajeesh Vadakkedath; **Spalatu, Nicolae**; **Katerski, Atanas**; Kulicek, Jaroslav; Razek, Bohuslav; Ukraintsev, Egor; Barinkova, Marketa Šlapal; Zoppi, Guillaume; **Krunks, Malle**; **Oja Acik, Ilona** Journal of alloys and compounds 2024 / art. 176175
<https://doi.org/10.1016/j.jallcom.2024.176175>

Amorphous Zn(O,Se) buffer layer for Cu(In,Ga)Se2 thin film solar cells

Abdalla, Akram; **Danilson, Mati**; **Oueslati, Souhaib**; **Pilvet, Maris**; **Bereznev, Sergei** Materials science in semiconductor processing 2021 / art. 105862 <https://doi.org/10.1016/j.mssp.2021.105862> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Analysis of cost function composition based on the horizon time prediction of an indirect MPC current control in single-phase grid-connected PV inverters

Pimentel, Sergio Pires; **Husev, Oleksandr**; **Vinnikov, Dmitri**; **Stepenko, Serhii** 2019 IEEE 60th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), 7-9 October 2019 : conference proceedings 2019 / 6 p. : ill <https://doi.org/10.1109/RTUCON48111.2019.8982377>

Analysis of grain orientation and defects in Sb2Se3 solar cells fabricated by close-spaced sublimation

Krautmann, Robert; **Spalatu, Nicolae**; Gunder, Rene; Abou-Ras, Daniel; Unold, Thomas; Schorr, Susan; **Oja Acik, Ilona**; **Krunks, Malle** GSFMT Scientific Conference 2021 : Tartu, June 14-15, 2021 : abstracts 2021 / P 17 https://fntdk.ut.ee/wp-content/uploads/2021/06/GSFMT_abstractbook_2021.pdf

Analysis of grain orientation and defects in Sb2Se3 solar cells fabricated by close-spaced sublimation : [journal article]

Krautmann, Robert; **Spalatu, Nicolae**; Gunder, Rene; Abou-Ras, Daniel; Unold, Thomas; Schorr, Susan; **Krunks, Malle**; **Oja Acik, Ilona** Solar energy 2021 / p. 494-500 <https://doi.org/10.1016/j.solener.2021.07.022> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Application of modulation spectroscopy methods in photovoltaic materials research = Modulatsioonspektroskoopia meetodite rakendamise päikeseenergeetika materjalide uurimiseks

Raadi, Taavi 2015 <https://digi.lib.ttu.ee/i/?2521> https://www.ester.ee/record=b4482452*est

Asjade interneti levikule töötavad anda hoogu erilised päikesepaneelid

Sibinski, Maciej novaator.err.ee 2024 [Asjade interneti levikule töötavad anda hoogu erilised päikesepaneelid](#)

Asymmetric NDI electron transporting SAM materials for application in photovoltaic devices

Svirskaitė, Lauryna Monika; **Mandati, Sreekanth**; **Spalatu, Nicolae**; Malinauskiene, Vida; Karazhanov, Smagul; Getautis, Vytautas; Malinauskas, Tadas Synthetic metals 2022 / art. 117214 <https://doi.org/10.1016/j.synthmet.2022.117214> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The band structure of CuInTe2 studied by optical reflectivity

Yakushev, Michael V.; Mudrov, Andrej; **Kärber, Erki** Applied physics letters 2019 / art. 062103, 4 p. : ill
<https://doi.org/10.1063/1.5079971> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Battery size optimization with customer PV installations and domestic load profile

Shabbir, Noman; **Kütt, Lauri**; **Astapov, Victor**; Jawad, Muhammad; Allik, Alo; **Husev, Oleksandr** IEEE Access 2022 / p. 13012-13025 : ill <https://doi.org/10.1109/ACCESS.2022.3147977> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Broad-band photoluminescence of donor-acceptor pairs in tetrahedrite Cu₁₀Cd₂Sb₄S₁₃ microcrystals
Krustok, Jüri; Raadik, Taavi; Kaupmees, Reelika; Ghisani, Fairouz; Timmo, Kristi; Altosaar, Mare; Mikli, Valdek; Grossberg, Maarja Journal of physics D: applied physics 2021 / art. 105102, 7 p. : ill <https://doi.org/10.1088/1361-6463/abce29> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Bulk and interface recombination in TiO₂/Sb₂Se₃ solar cells
Krautmann, Robert; Josepson, Raavo; Spalatu, Nicolae; Oja Acik, Ilona Graduate School of Functional Materials and Technology (GSFMT) Scientific Conference : abstracts 2022 / p. 28 [Graduate School of Functional Materials and Technology \(GSFMT\) Scientific Conference 2022](#)

Carrier collection losses in interface passivated amorphous silicon thin-film solar cells
Neumüller, A.; Bereznev, Sergei; Ewert, M.; Volobujeva, Olga Applied physics letters 2016 / p. 043903-1 - 043903-4 : ill <https://doi.org/10.1063/1.4959995> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Characterisation of ultrasonically sprayed In_xSy buffer-layers for Cu(In,Ga)Se₂ solar cells
Ernits, Kaia; Bremaud, D.; **Mellikov, Enn** Thin solid films 2007 / 15, p. 6051-6054
<https://www.sciencedirect.com/science/article/abs/pii/S0040609006016178>

Characterization of Cu₂ZnSnSe₄ monograin layer solar cells
Altosaar, Mare; Timmo, Kristi; Danilson, Mati; Raudoja, Jaan; Mellikov, Enn Proceedings of the International Conference on Solar Cells : IC-SOLACE 2008 : January 21-23, 2008, Cochin, India 2008 / p. 103-105 : ill

Characterization of FeS₂ pyrite microcrystals synthesized in different flux media
Kristmann, Katrin; Raadik, Taavi; Altosaar, Mare; Danilson, Mati; Krustok, Jüri; Paaver, Peeter; Butenko, Yuriy Materials advances 2023 / p. 1565 - 1575 <https://doi.org/10.1039/D3MA00697b> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Characterization of sprayed large grain CuInS₂ as absorbers for solar cells
Krunk, Malle; Mere, Arvo; Kijatkina, Olga; Rebane, Helen; Mikli, Valdek 20-th NSM : Tampere, 2003 2003

Characterization of ZnO-nanorod/In₂S₃/CuInS₂ solar cell, and properties of the constituent layers
Kärber, Erki TÜ ja TTÜ doktorikool "Funktsionaalsed materjalid ja tehnoloogiad" : 04.-05. märts 2014, Tartu 2014 / [1] p

Charge selective contact on ultra-thin In(OH)_xSy/Pb(OH)_xSy heterostructure prepared by SILAR
Gavrilov, S.; **Oja Acik, Ilona;** Lim, B. Physica status solidi (a) 2006 / 5, p. 1024-1029 : ill
<https://onlinelibrary.wiley.com/doi/pdf/10.1002/pssa.200521468>

Chemical bath deposition of SnS thin films on ZnS and CdS substrates
Safonova, Maria; Nair, Padmanabhan Pankajakshy Karunakaran; **Mellikov, Enn;** Garcia, A. R.; **Kerm, Karin; Revathi, Naidu;** Romann, Tavo; **Mikli, Valdek; Volobujeva, Olga** Journal of materials science : materials in electronics 2014 / p. 3160-3165 : ill
<https://doi.org/10.1007/s10854-014-1998-8> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Chemical composition of sprayed copper indium disulfide films for nanostructured solar cells = Pihustatud vaskindiumdisulfid-kilede keemiline koostis ja rakendus nanostruktuursetes päikesepatareides
Katerski, Atanas 2011 <https://digi.lib.ttu.ee/i/?524>

Chemical etching of tetrahedrite Cu₁₀Cd₂Sb₄S₁₃ monograin powder materials for solar cell applications
Ghisani, Fairouz; Timmo, Kristi; Altosaar, Mare; Mikli, Valdek; Danilson, Mati; Grossberg, Maarja; Kauk-Kuusik, Marit Materials science in semiconductor processing 2022 / art. 106291 <https://doi.org/10.1016/j.mssp.2021.106291> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Chemical incorporation of copper into indium selenide thin-films for processing of CuInSe₂ solar cells
Hibberd, C.J.; **Ernits, Kaia;** Kaelin, M.; Mueller, U.; Tiwari, A.N. Progress in photovoltaics : research and applications 2008 / 7, p. 585-593 : ill

Chemical treatment of tetrahedrite Cu₁₀Cd₂Sb₄S₁₃ monograin powder
Ghisani, Fairouz; Timmo, Kristi; Altosaar, Mare GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 24 <http://fntdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

Chemistry of CdCl₂:O₂ flux for CdTe solar cell technology
Hiie, Jaan; Valdna, Vello; Kois, Julia; Danilson, Mati; Mikli, Valdek Proceedings of the 19th EPVSECE conference 2004 / p. 927

Comparative study of siox layers deposition using thermal and uv-assisted curing of perhydropolysilazane
Shmagina, Elizaveta; Bereznev, Sergei GSFMT Scientific Conference 2021 : Tartu, June 14-15, 2021 : abstracts 2021 / P 50

Comparative study of SnS recrystallization in molten CdI₂, SnCl₂ and KI

Timmo, Kristi; Kauk-Kuusik, Marit; Pilvet, Maris; Mikli, Valdek; Kärber, Erki; Raadik, Taavi; Leinemann, Inga; Altosaar, Mare; Raudoja, Jaan *Physica status solidi (c)* 2016 / p. 8-12 : ill <https://doi.org/10.1002/pssc.201510082> [Journal metrics at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Comparative study of thin films prepared by different curing methods of perhydropolysilazane

Shmagina, Elizaveta; Danilson, Mati; Mikli, Valdek; Bereznev, Sergei Graduate School of Functional Materials and Technology (GSFMT) Scientific Conference : abstracts 2022 / art. 54 [Graduate School of Functional Materials and Technology \(GSFMT\) Scientific Conference 2022](#)

Comparison of performance of phase-shift and asymmetrical pulse width modulation techniques for the novel galvanically isolated buck-boost dc-dc converter for photovoltaic applications

Vinnikov, Dmitri; Chub, Andrii; Kosenko, Roman; Zakis, Janis; Liivik, Elizaveta *IEEE journal of emerging and selected topics in power electronics* 2017 / p. 624-637 : ill <https://doi.org/10.1109/JESTPE.2016.2631628> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Compositionally tunable structure and optical properties of Cu_{1.85}(Cd_xZn_{1-x})_{1.1}SnS_{4.1} (0 ≤ x ≤ 1) monograin powders

Pilvet, Maris; Kauk-Kuusik, Marit; Altosaar, Mare; Grossberg, Maarja; Danilson, Mati; Timmo, Kristi; Mere, Arvo; Mikli, Valdek *Thin solid films* 2015 / p. 180-183 : ill <https://doi.org/10.1016/j.tsf.2014.10.091> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Conference Proceedings at WOS](#) [Article at WOS](#)

Comprehensive study of photoluminescence and device properties in Cu₂Zn(Sn_{1-x}Gex)S₄ monograins and monograin layer solar cells

Mengü, Idil; Muska, Katri; Pilvet, Maris; Mikli, Valdek; Dudutiene, Evelina; Kondrotas, Rokas; Krustok, Jüri; Kauk-Kuusik, Marit; Grossberg-Kuusk, Maarja *Solar energy materials and solar cells* 2024 / art. 113124 <https://doi.org/10.1016/j.solmat.2024.113124>

Conductive polymer back contact in CdTe based solar cell

Bereznev, Sergei; Kois, Julia; Volobujeva, Olga; Öpik, Andres EMRS-2009 Spring Meeting, Strasbourg, France, 8-12 of June 2009, Symposium A 2009 / p. 25

Control of multiport partial power converters for PV-battery systems integration in DC microgrids

Yadav, Neelesh; Mitra, Tuhin; Makkieh, Ahmad; Chub, Andrii 2025 IEEE Seventh International Conference on DC Microgrids (ICDCM) 2025 / 6 p <http://doi.org/10.1109/ICDCM63994.2025.11144705>

Control over MoSe₂ formation with vacuum-assisted selenization of one-step electrodeposited Cu-In-Ga-Se precursor layers

Mandati, Sreekanth; Misra, Prashant; Boosagulla, Divya; Tata, Narasinga Rao; Bulusu, Sarada V. *Environmental science and pollution research* 2021 / p. 15123-15129 : ill <https://doi.org/10.1007/s11356-020-11783-z>

Controlled annealing process for efficient CdTe thin film solar cells [Online resource]

Spalatu, Nicolae; Hiie, Jaan; Krunks, Malle [2018 E-MRS Spring Meeting and Exhibit : Materials for energy and environment : Thin film chalcogenide photovoltaic materials : program] 2018 / A.PII.29 <https://www.european-mrs.com/thin-film-chalcogenide-photovoltaic-materials-emrs> https://www.etis.ee/File/DownloadPublic/d661bb08-33fb-49cb-9ce9-8c6e1c3228ce?name=Fail_Abstracts%20EMRS%202018_SYMPOSIUM%20A_Thin%20film%20chalcogenide%20photovoltaic%20materials.pdf&type=application%2Fpdf

Copper chalcopyrites for solar energy applications

Mandati, Sreekanth; Misra, Prashant; Sarada, Bulusu V.; Rao, Tata Narasinga *Transactions of the Indian Institute of Metals* 2019 / p. 271-288 : ill <https://doi.org/10.1007/s12666-018-1455-0>

Cost-effective fluorene and thiophene containing hole conductors towards semi-transparent Sb₂S₃ absorber-based solar cells

Mandati, Sreekanth; Juneja, Nimish; Katerski, Atanas; Jegorove, Aiste; Daskeviciute-Geguziene, Sarune; Grzibovskis, Raitis; Vembris, Aivars; Spalatu, Nicolae; Magomedov, Artiom; Karazhanov, Smagul; Getautis, Vytautas; Krunks, Malle; Oja Acik, Ilona *WCPEC-8 : 8th World Conference on Photovoltaic Energy Conversion* 2022 / p. 470-473 <https://doi.org/10.4229/WCPEC-82022-2BV.2.70>

Cost-effective sprayed CuInS₂ films for solar cells

Krunks, Malle; Kijatkina, Olga; Blums, J.; Oja, Ilona; Mere, Arvo; Mellikov, Enn *Seventeenth European Photovoltaic Solar Energy Conference : proceedings of the International Conference held in Munich, Germany, 22-26 October, 2001. Volume II* 2002 / p. 1211-1214 : ill

CZTS (Cu₂ZnSnSe₄) crystal growth for use in monograin membrane solar cells

Klavina, Inga; Raudoja, Jaan; Altosaar, Mare; Mellikov, Enn; Meissner, Dieter; Kaljuvee, Tiit *Conference proceedings of the Conference of Young Scientists on Energy Issues : Kaunas, Lithuania, 27-28 May, 2010* 2010 / p. VII 345 - VII 353

CZTS (Kesterite) monograin membranes for photoelectrochemical water splitting (preparation and characterization)
Kouhiisfahani, Elham; Samiepour, Ali; Meissner, Dieter TÜ ja TTÜ doktorikool "Funktsionaalsed materjalid ja tehnoloogiad" :
04.-05. märts 2014, Tartu 2014 / [1] p. : ill

Cu₂ZnSnS₄ monograin layer solar cells for flexible photovoltaic applications
Kauk-Kuusik, Marit; Timmo, Kristi; Pilvet, Maris; Muska, Katri; Danilson, Mati; Krustok, Jüri; Josepson, Raavo; Mikli, Valdek; Grossberg-Kuusk, Maarja Journal of materials chemistry A 2023 / p. 23640-23652 <https://doi.org/10.1039/D3TA04541B>
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Cu₂ZnSnSe₄ monograin powders for solar cell application [Electronic resource]
Altosaar, Mare; Raudoja, Jaan; Timmo, Kristi; Danilson, Mati; Grossberg, Maarja; Krunks, Malle; Varema, Tiit; Mellikov, Enn
2006 IEEE 4th World Conference on Photovoltaic Energy Conversion - WCPEC 2006 / [CD-ROM]

Cu(In,Ga)Se₂ monograin powders with different Ga content for solar cells
Timmo, Kristi; Kauk-Kuusik, Marit; Pilvet, Maris; Altosaar, Mare; Grossberg, Maarja; Danilson, Mati; Kaupmees, Reelika; Mikli, Valdek; Raudoja, Jaan; Varema, Tiit Solar energy 2018 / p. 648–655 : ill <https://doi.org/10.1016/j.solener.2018.10.078> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

CuInS₂ solar cell absorber plasmonically modified by gold nanoparticles
Repän, Taavi; Dolgov, Leonid; Katerski, Atanas; Oja Acik, Ilona; Kärber, Erki; Mere, Arvo; Mikli, Valdek; Krunks, Malle; Sildos, Ilmo Applied physics. A, Materials science & processing 2014 / p. 455-458 : ill <https://doi.org/10.1007/s00339-014-8681-z> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

CuInS₂–Poly(3-(ethyl-4-butanoate)thiophene) nanocomposite solar cells : preparation by an in situ formation route, performance and stability issues
Maiera, Eugen; Ratha, Thomas; Haas, Wernfried; Werzer, Oliver; Saf, Robert; Hofer, Ferdinand; Meissner, Dieter; Volobujeva, Olga; Bereznev, Sergei; Mellikov, Enn; Amenitsch, Heinz; Resel, Roland; Trimmel, Gregor Solar energy materials and solar cells 2011 / p. 1354–1361 : ill

CuInSe₂ koostise uurimine polarograafilisel meetodil
Kauk, Marit; Altosaar, Mare; Raudoja, Jaan XXVII Eesti keemiapäevad : teaduskonverentsi ettekannete referaadid = 27th Estonian Chemistry Days : abstracts of scientific conference 2001 / lk. 49-50

Current harmonic aggregation cases for contemporary loads
Daniel, Kamran; Kütt, Lauri; Iqbal, Muhammad Naveed; Shabbir, Noman Energies 2022 / art. 437
<https://doi.org/10.3390/en15020437> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Deposition and characterization of zinc–tin oxide thin films with varying material compositions
Spasova, Stanka; Dulev, Vladimir; Benkovsky, Alexander; Palankovski, Vassil; Radeva, Ekaterina; Stoykov, Rumen; Nenova, Zoya; Dikov, Hristosko; Katerski, Atanas; Volobujeva, Olga Coatings 2025 / art. 225 <https://doi.org/10.3390/coatings15020225>

Design and implementation of flyback MPPT converter for PV-applications
Suskis, Pavels; Zakis, Janis; Galkin, Ilja PQ2014 : the 9th International 2014 Electric Power Quality and Supply Reliability Conference (PQ) : June 11-13, 2014, Rakvere, Estonia : proceedings 2014 / p. 291-296 : ill

Detailed insight into the CZTS/CdS interface modification by air annealing in monograin layer solar cells
Kauk-Kuusik, Marit; Timmo, Kristi; Muska, Katri; Pilvet, Maris; Krustok, Jüri; Josepson, Raavo; Brammertz, Guy; Vermang, Bart; Danilson, Mati; Grossberg, Maarja ACS Applied Energy Materials 2021 / p. 12374–12382
<https://doi.org/10.1021/acsaem.1c02186> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Detailed photoluminescence study of Cu₂Ge(SSe)₃ microcrystals
Kuusik, Jüri; Kaupmees, Reelika; Li, Xiaofeng; Kauk-Kuusik, Marit; Grossberg, Maarja AIP advances 2021 / art. 085105
<https://doi.org/10.1063/5.0053928> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Development and application of energy producing solar pavement in Estonia
Jalakas, Tanel; Chub, Andrii; Vinnikov, Dmitri; Spalatu, Nicolae; Gudkova, Viktoria; Krunks, Malle; Mere, Arvo; Lahi, Allan
2022 IEEE 63th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON): conference proceedings 2022 / 5 p. : ill <https://doi.org/10.1109/RTUCON56726.2022.9978908>

Development of antimony sulfide thin-film solar cells for semitransparent applications
Beglyryan, Robert; Katerski, Atanas; Oja Acik, Ilona; Krunks, Malle Graduate School of Functional Materials and Technology (GSFMT) Scientific Conference : abstracts 2022 / 9 l. [Graduate School of Functional Materials and Technology \(GSFMT\) Scientific Conference 2022](#)

Development of band gap tuned CU₂ZN(SN₁–XGEX)₄ monograin powders

Mengü, Idil; Grossberg-Kuusik, Maarja; Muska, Katri; Pilvet, Maris; Mikli, Valdek; Kaupmees, Reelika; Krustok, Jüri; Kauk-Kuusik, Marit Graduate School of Functional Materials and Technology (GSFMT) Scientific Conference : abstracts 2022 / 39 I. [Graduate School of Functional Materials and Technology \(GSFMT\) Scientific Conference 2022](#)

Development of Bi₂S₃ thin film solar cells by close-spaced sublimation and analysis of absorber bulk defects via in-depth photoluminescence analysis

Koltsov, Mykhailo; Gopi, Sajeesh Vadakkedath; Raadik, Taavi; Krustok, Jüri; Josepson, Raavo; Gržibovskis, Raitis; Vembris, Aivars; **Spalatu, Nicolae** Solar energy materials and solar cells 2023 / art. 112292 <https://doi.org/10.1016/j.solmat.2023.112292> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Development of Bi₂S₃ thin-film solar cells by close-spaced sublimation

Koltsov, Mykhailo; Krautmann, Robert; Gopi, Sajeesh Vadakkedath; Hiie, Jaan; Krunks, Malle; Oja Acik, Ilona; Spalatu, Nicolae Graduate School of Functional Materials and Technology (GSFMT) Scientific Conference : abstracts 2022 / 25 I. [Graduate School of Functional Materials and Technology \(GSFMT\) Scientific Conference 2022](#)

Development of porous TiO₂ thin films by sol-gel process

Oja, Ilona; Sabataityte, Julija; Volobujeva, Olga; Krunks, Malle The Fourth International Conference on Advanced Optical Materials and Devices : (AOMD-4) : Tartu, Estonia, July 6-9, 2004 : abstracts 2004 / p. 46

Development of Sb₂Se₃ and Sb₂S₃ thin film solar cells by close-spaced sublimation = Sb₂Se₃ ja Sb₂S₃ õhukesekileliste päikesepatareide arendamine lähidistants-sublimatsiooni meetodil

Krautmann, Robert 2023 <https://doi.org/10.23658/taltech.41/2023> <https://digikogu.taltech.ee/et/Item/e7e64926-5d49-40ad-8b3a-e225ea034f7d> https://www.ester.ee/record=b5573313*est

Development organic back contact for thin-film CdS/CdTe solar cell

Khrypunov, G.; **Bereznev, Sergei;** Meriuts, A.; Kopach, G.; Kovtun, N.; Deyneko, N. Physics and chemistry of solid state 2010 / 1, p. 248-251 : ill

Device characteristics of CuInSe₂ based solar cells

Krustok, Jüri; Danilson, Mati; Jagomägi, Andri; Grossberg, Maarja; Raudoja, Jaan Proceedings of SPIE 2005 / Optical materials and applications, p. 236-242

Device characteristics of CuInSe₂ based solar cells

Krustok, Jüri; Danilson, Mati; Jagomägi, Andri; Grossberg, Maarja; Raudoja, Jaan The Fourth International Conference on Advanced Optical Materials and Devices : (AOMD-4) : Tartu, Estonia, July 6-9, 2004 : abstracts 2004 / p. 45

Dopant-free fluorene based dimers linked with thiophene units as prospective hole transport materials for Sb₂S₃ solar cells

Juneja, Nimish; Jegorove, Aiste; Grzibovskis, Raitis; **Katerski, Atanas;** Malinauskas, Tadas; Vembris, Aivars; Karazhanov, Smagul; **Spalatu, Nicolae;** Getautis, Vytautas; **Krunks, Malle; Oja Acik, Ilona** Sustainable Energy & Fuels 2024 / p. 4324-4334 <https://doi.org/10.1039/D4SE00472H> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Economic pulse electrodeposition for flexible CuInSe₂ solar cells

Mandati, Sreekanth; Misra, Prashant; Boosagulla, Divya; Rao, Tata Naransinga; Sarada, Bulusu V. Materials for renewable and sustainable energy 2020 / art. 19, 6 p. : ill <https://doi.org/10.1007/s40243-020-00177-3>

Eesti teadlased sillutavad teed Kuul päikeseenergia tootmiseks

postimees.ee 2025 <https://teadus.postimees.ee/8196384/eesti-teadlased-sillutavad-teed-kuul-paikeseenergia-tootmiseks>

Eesti teadlaste nutikad minuundurid hoogustavad energiapööret

Vinnikov, Dmitri; Chub, Andrii novaator.err.ee 2024 [Eesti teadlaste nutikad minuundurid hoogustavad energiapööret](#)

Eesti teadlaste osalusel arendatud päikesepaneelid saab teha odavatest ja maakoorest laialt levinud materjalidest

Kauk-Kuusik, Marit toostusuudised.ee 2025 [Eesti teadlaste osalusel arendatud päikesepaneelid saab teha odavatest ja maakoorest laialt levinud materjalidest](#)

Eestlaste pöördeline teekate salvestab päikeseenergiat

Director. Inseneeria 2017 / lk. 118-121 : fot https://artiklid.elnet.ee/record=b2828537*est

Effect of absorber surface modification on the optoelectronic properties of Cu₂CdGeSe₄ solar cells

Li, Xiaofeng; Pilvet, Maris; Timmo, Kristi; Grossberg, Maarja; Danilson, Mati; Mikli, Valdek; Kauk-Kuusik, Marit Thin solid films 2020 / art. 137822, 7 p. : ill <https://doi.org/10.1016/j.tsf.2020.137822> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of Annealing in Air on the Structural and Optical Properties and Efficiency Improvement of TiO₂/Cu_xO Solar Cells Obtained via Direct-Current Reactive Magnetron Sputtering

Wisn, Grzegorz; **Sibinski, Maciej**; Labuz, Miroslaw; Potera, Piotr; Ploch, Dariusz; Bester, Mariusz; Yavorskyi, Rostyslav Materials 2025 / art. 888 <https://doi.org/10.3390/ma18040888>

Effect of CdCl₂ annealing treatment on structural and optoelectronic properties of close spaced sublimation CdTe/CdS thin film solar cells vs deposition conditions

Spalatu, Nicolae; Hiie, Jaan; Mikli, Valdek; Krunks, Malle; Valdna, Vello; Maticiuc, Natalia; Raadik, Taavi; Caraman, Mihail Thin solid films 2015 / p. 128-133 : ill <http://dx.doi.org/10.1016/j.tsf.2014.11.066> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of CdCl₂ vapor phase pretreatment annealing on the properties of CSS CdS and CdTe/CdS thin film solar cells

Spalatu, Nicolae; Hiie, Jaan; Valdna, Vello; Krunks, Malle; Caraman, Mihail; **Mikli, Valdek; Maticiuc, Natalia** 2014 Spring Meeting Lille, France : May 26-30. Symposium A, Thin film chalcogenide photovoltaic materials 2014 / p. 17

Effect of distributed photovoltaic generation on the voltage magnitude in a self-contained power supply system

Lukutin, Boris V.; Shandarova, Elena B.; Makarova, A.F.; **Švartsman, Inna** International Scientific and Practical Conference on Urgent Problems of Modern Mechanical Engineering 17–18 December 2015, Yurga, Russia 2016 / art. 012005 <https://doi.org/10.1088/1757-899X/127/1/012005> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Effect of the thickness on the electrical and optical properties of ZN(O,Se) layers prepared by PLD

Abdalla, Akram; Bereznev, Sergei GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 10 <http://fmdtk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

Effect of the titanium isopropoxide : acetylacetone molar ratio on the photocatalytic activity of TiO₂ thin films

Spiridonova, Jekaterina; Katerski, Atanas; Danilson, Mati; Kritševskaja, Marina; Krunks, Malle; Oja Acik, Ilona Molecules 2019 / art. 4326, 14 p. : ill <https://doi.org/10.3390/molecules24234326> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effects of Ar⁺ etching of Cu₂ZnSnSe₄ thin films : An x-ray photoelectron spectroscopy and photoluminescence study

Yakushev, Michael V.; Sulimov, Mikhail A.; Skidchenko, Ekaterina; **Krustok, Jüri** Journal of Vacuum Science & Technology B 2018 / art. 061208, 8 p. : ill <https://doi.org/10.1116/1.5050243> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effects of irradiation of ZnO/CdS/Cu₂ZnSnSe₄/Mo/glass solar cells by 10 MeV electrons on photoluminescence spectra

Sulimov, M. A.; Sarychev, M.N.; Yakushev, Michael V.; **Krustok, Jüri** Materials science in semiconductor processing 2021 / art. 105301, 5 p. : ill <https://doi.org/10.1016/j.mssp.2020.105301> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effects of selenisation temperature on photoluminescence and photoluminescence excitation spectra of ZnO/CdS/Cu₂ZnSnSe₄/Mo/glass

Sulimov, Mikhail A.; Yakushev, M. V.; Marquez-Prieto, J.; **Krustok, Jüri** Thin solid films 2019 / p. 146-151 : ill <https://doi.org/10.1016/j.tsf.2019.01.002> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effects of sulphur and tin disulphide vapour treatments of Cu₂ZnSnS(Se)₄ absorber materials for monograin solar cells

Kauk, Marit; Muska, Katri; Altosaar, Mare; Raudoja, Jaan; Pilvet, Maris; Varema, Tiit; Timmo, Kristi; Volobujeva, Olga Energy procedia 2011 / p. 197-202 <https://www.sciencedirect.com/science/article/pii/S1876610211020030>

Efficiency enhancement of Cu₂ZnSnS₄ monograin layer solar cells via absorber post-growth treatments

Timmo, Kristi; Dolcet Sadurni, Marc; Pilvet, Maris; Muska, Katri; Altosaar, Mare; Mikli, Valdek; Atlan, Fabien; Guc, Maxim; Izquierdo-Roca, Victor; **Grossberg-Kuusk, Maarja; Kauk-Kuusik, Marit** Solar energy materials and solar cells 2023 / art. 112090 <https://doi.org/10.1016/j.solmat.2022.112090> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Ei saa me ilma Päikeseta

Grossberg-Kuusk, Maarja Sirp 2025 / lk. 10-11 : fot <https://sirp.ee/s1-artiklid/c21-teadus/ei-saa-me-ilma-paikeseta/>

E-katend kaitseb lii kluses kõige nõrgemaid

Mente et Manu 2021 / lk. 31 [Mente et Manu 2/2021](#)

Electrical characterization of all-layers-sprayed solar cell based on ZnO nanorods and extremely thin CIS absorber

Kärber, Erki; Katerski, Atanas; Krunks, Malle Solar energy 2013 / p. 48-58 : ill <https://doi.org/10.1016/j.solener.2013.01.020> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Electrical characterization of annealed chemical-bath-deposited CdS films and their application in superstrate configuration CdTe/CdS solar cells

Graf, Aleksandr; Maticiuc, Natalia; Spalatu, Nicolae; Mikli, Valdek; Mere, Arvo; Gavrilov, Aleksei; Hiie, Jaan Thin solid films 2015 / p. 351-355 : ill <https://doi.org/10.1016/j.tsf.2014.11.003> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Conference Proceedings at WOS](#) [Article at WOS](#)

Electrical characterization of cadmium sulfide films, annealed in reducing, neutral and oxidizing ambients of H₂, N₂, and air

Graf, Aleksandr; Gavrilov, Aleksei; Hiie, Jaan TÜ ja TTÜ doktorikool "Funktsionaalsed materjalid ja tehnoloogiad" : 04.-05. märts 2014, Tartu 2014 / [1] p

Electrical characterization of nanostructured CIS solar cell prepared by chemical spray pyrolysis

Kärber, Erki; Abass, Aimi; Khelifi, Samira; Burgelman, Marc; Mere, Arvo; Katerski, Atanas; Krunks, Malle NEXTGEN NANO PV : book of abstracts 2013 / p. 80-81

Electrochemical deposition of CuInSe₂ thin films for photovoltaic applications = CuInSe₂ õhukesed kiled elektrokeemilise sadestamise meetodil

Kois, Julia 2006

Electrochemically synthesised CdSe nanofibers and pearl-chain nanostructures for photovoltaic applications

Kois, Julia; Bereznev, Sergei; Gurevič, Jelena; Volobujeva, Olga Materials letters 2013 / p. 110-113 : ill

<https://doi.org/10.1016/j.matlet.2012.11.122> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Electrodeposited CDSE nanomatrix for hybrid polymer solar cells

Gurevič, Jelena; Bereznev, Sergei; Mikli, Valdek; Naidu, Revathi; Öpik, Andres; Mellikov, Enn; Kois, Julia Baltic Polymer Symposium 2015 : Sigulda, Latvia, September 16-18 : programme and proceedings 2015 / p. 96 : ill

Electrodeposited molybdenum oxide coatings for thin film chalcopyrite solar cells

Ganchev, Maxim; Dimitrov, Dimiter; Stankova, Stanka; Katerski, Atanas; Gadjev, Iliya; Volobujeva, Olga; Mere, Arvo; Bereznev, Sergei; Krunks, Malle 10th Jubilee Conference of the Balkan Physical Union 2019 / art. 140002 <https://doi.org/10.1063/1.5091317> Conference proceedings at Scopus Article at Scopus Article at WOS

Electrodeposition and characterization of CuInSe₂ for applications in thin film solar cells

Kois, Julia; Bereznev, Sergei; Volobujeva, Olga; Mellikov, Enn Conference on Knowledge-based Materials and Technologies for Sustainable Chemistry : 1-5 June 2005, Tallinn, Estonia : abstract book 2005 / p. 93

Electrodeposition of CdSe nanofibers as photo-active matrix for polymer solar cells

Kois, Julia; Bereznev, Sergei; Gurevič, Jelena; Mellikov, Enn; Öpik, Andres Baltic Polymer Symposium 2013 : Trakai, Lithuania, September 18-21, 2013 : programme [and abstracts] 2013 / p. 122

Electrodeposition of CdSe nanomatrix for hybrid solar cells

Bereznev, Sergei; Gurevič, Jelena; Kois, Julia; Mellikov, Enn 12th International Conference on Nanosciences & Nanotechnologies : 7-10 July 2015, Porto Palace Conference Centre & Hotel, Thessaloniki, Greece : book of abstracts 2015 / p. 166

Electrodeposition of Cu-In-Ga thin metal films for Cu(In, Ga)Se₂ based solar cells

Kois, Julia; Ganchev, M.; Kaelin, M.; Bereznev, Sergei; Tzvetkova, E.; Volobujeva, Olga; Stratieva, N.; Tiwari, A.N. Thin solid films 2008 / 18, p. 5948-5952 : ill <https://www.sciencedirect.com/science/article/pii/S0040609007017415>

Electronic and structural characterisation of Cu₃BiS₃ thin films for the absorber layer of sustainable photovoltaics

Yakushev, M.V.; Maiello, P.; Raadik, Taavi; Krustok, Jüri Thin solid films 2014 / p. 195-199 : ill <https://doi.org/10.1016/j.tsf.2014.04.057> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Electronic structure and defect states in bismuth and antimony sulphides identified by energy-resolved electrochemical impedance spectroscopy

Miliaieva, D.; Nadaždy, V.; Koltsov, M. A.; Lopez, C.; Saeeyekta, H.; Kuliček, J.; Cazorla, C.; Saucedo, E.; Grzibovskis, Raitis; Vembris, Aivars; Krunks, Malle; Spalatu, Nicolae Journal of Physics Energy 2025 / art. 035012 <https://doi.org/10.1088/2515-7655/add59f>

EMI-transparent SB2S3 solar cells with fluorene-based enamine as hole transport material

Juneja, Nimish; Mandati, Sreekanth; Daskeviciute-Geguziene, Sarune; Vembris, Aivars; Getautis, Vytautas; Krunks, Malle; Oja Acik, Ilona Graduate School of Functional Materials and Technology (GSFMT) Scientific Conference : abstracts 2022 / 21 l. [Graduate School of Functional Materials and Technology \(GSFMT\) Scientific Conference 2022](#)

Employment of dopant-free fluorene-based enamines as innovative hole transport materials to boost the transparency and performance of Sb2S3 based solar cells

Juneja, Nimish; Daskeviciute-Geguziene, Sarune; Spalatu, Nicolae; Mandati, Sreekanth; Katerski, Atanas; Grzibovskis, Raitis; Vembris, Aivars; Karazhanov, Smagul; Getautis, Vytautas; Krunks, Malle; Oja Acik, Ilona Materials science in semiconductor processing 2024 / art. 107934 <https://doi.org/10.1016/j.mssp.2023.107934>

Energiat säästvatest liginullenergiamaajadest tulevikus pääsu pole. Ehitamine läheb kallimaks.

Rand, Jana Maaleht 2018 / lk. 2-3

Energiat tootev teekatend nüüd ka Eestis

Jalakas, Tanel; Chub, Andrii; Vinnikov, Dmitri; Spalatu, Nicolae; Gudkova, Viktoria; **Krunks, Malle; Mere, Arvo; Lahi, Allan;** Lindvest, Andre Elektriala 2023 / lk. 14-16 : portr., fot https://www.ester.ee/record=b1240496*est

Energy efficient behavior modeling for demand side recommender system in solar microgrid applications using multi-agent reinforcement learning model

Onile, Abiodun Emmanuel; Belikov, Juri; Levron, Yoash; **Petlenkov, Eduard** Sustainable cities and society 2023 / art. 104392, 20 p. : ill <https://doi.org/10.1016/j.scs.2023.104392> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Energy harvesting technologies - potential application to wearable health-monitoring

Ahmed, Faisal; Le Moullec, Yannick; Annus, Paul The 10th International Conference on Bioelectromagnetism : proceedings 2015 / [4] p. : ill

Energy yield assessment methodology for photovoltaic microinverters

Chub, Andrii; Kosenko, Roman; Korkh, Oleksandr; Vinnikov, Dmitri; Kouro, Samir 2019 IEEE 15th Brazilian Power Electronics Conference and 5th IEEE Southern Power Electronics Conference (COBEP/SPEC 2019) Santos, Brazil, 1-4 December 2019 2019 / p. 1178-1183 : ill <http://toc.proceedings.com/52923webtoc.pdf>

Enhanced efficiency of hybrid amorphous silicon solar cells based on single-walled carbon nanotubes and polymer composite thin film

Rajanna, Pramod M.; Gilshteyn, Evgenia P.; Yagafarov, Timur; Alekseeva, Alena A.; Anisimov, Anton S.; Neumüller, Alex; Sergeev, Oleg; **Bereznev, Sergei; Maricheva, Jelena;** Nasibulin, Albert Nanotechnology 2018 / 10 p. : ill <https://doi.org/10.1088/1361-6528/aaa647> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Enhanced grain orientation in Sb₂Se₃ thin films deposited on Mo/BSG substrates via RF-sputtering and selenization

Uslu, Mehmet Ender; Muska, Katri; Pilvet, Maris; Bereznev, Sergei; Mikli, Valdek; Kauk-Kuusik, Marit; Grossberg-Kuusk, Maarja Materials science in semiconductor processing 2024 / art. 108835 <https://doi.org/10.1016/j.mssp.2024.108835>

Enhanced photocatalytic activity of ZnO nanorods by surface treatment with HAuCl₄ : synergic effects through an electron scavenging, plasmon resonance and surface hydroxylation

Dedova, Tatjana; Oja Acik, Ilona; Chen, Zengjun; Katerski, Atanas; Balmassov, Kirill; Gromōko, Inga; Nagyne-Kovacs, T.; Szilagyi, I.M.; **Krunks, Malle** Materials chemistry and physics 2020 / art. 122767 <https://doi.org/10.1016/j.matchemphys.2020.122767> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Enhancement of residential PV energy storage system by supercapacitor battery – high spatial resolution data analysis

Rogowski, Szymon; **Hasan, Sayeed; Chub, Andrii; Sibinski, Maciej** Proceedings of the Estonian Academy of Sciences 2025 / p. 269-280 <https://doi.org/10.3176/proc.2025.2S.01>

Estonian student satellite Hämarik source of valuable lessons

news.err.ee 2024 [Estonian student satellite Hämarik source of valuable lessons](#)

Experimental evaluation and numerical modelling of the quality of photovoltaic modules

Tšukrejev, Pavel; Karjust, Kristo; Majak, Jüri Proceedings of the Estonian Academy of Sciences 2021 / p. 477-483 : ill <https://doi.org/10.3176/proc.2021.4.15> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Experimental Investigation of high frequency 3L-NPC qZS inverter for photovoltaic application

Husev, Oleksandr; Stepenko, Serhii; Roncero-Clemente, Carlos; Romero-Cadaval, Enrique; Strzelecki, Ryszard Proceedings : IECON 2013 - 39th Annual Conference of the IEEE Industrial Electronics Society : Austria Center Vienna, Vienna, Austria, 10-14 November, 2013 2013 / p. 5969-5974 : ill <https://doi.org/10.1109/IECON.2013.6700114> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Extremely thin absorber layer solar cells on zinc oxide nanorods by chemical spray

Krunks, Malle; Kärber, Erki; Katerski, Atanas; Otto, Kairi; Oja Acik, Ilona; Dedova, Tatjana; Mere, Arvo Solar energy materials & solar cells 2010 / p. 1191-1195

Fabrication of polydimethylsiloxane stamps

Dhoska, Klodian; Sinani, Uljan; Komina, Bledar 16th International Symposium "Topical Problems in the Field of Electrical and Power Engineering. Doctoral School of Energy and Geotechnology III" : Pärnu, Estonia, January 16-21, 2017 2017 / p. 11-14 : ill http://www.ester.ee/record=b4650094*est

Fault analysis and field experiences of central inverter based 2 MW PV plant

Dumnic, Boris; **Livik, Elizaveta;** Milicevic, Dragan 2018 20th European Conference on Power Electronics and Applications (EPE'18 ECCE Europe) : Riga, Latvia, 17-21 September 2018 2018 / p. 2281-2290 : ill <https://ieeexplore.ieee.org/document/8515423>

Fault-tolerant approach for photovoltaic module-level power electronic applications

Vinnikov, Dmitri; Chub, Andrii; Korkh, Oleksandr; Malinowski, Mariusz 2020 IEEE 14th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : proceedings 2020 / p. 438-444 : ill <https://doi.org/10.1109/CPE-POWERENG48600.2020.9161599>

Feasibility investigation for residential battery sizing considering EV charging demand

Shabbir, Noman; Kütt, Lauri; Daniel, Kamran; Astapov, Victor; Raja, Hadi Ashraf; Iqbal, Muhammad Naveed; Husev, Oleksandr Sustainability 2022 / art. 1079 <https://doi.org/10.3390/su14031079> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Feasibility Study of Snow Removal from PV Module Using Universal Power Electronic Interface

Chauhan, Sachin; Chub, Andrii; Hasan, Sayeed; Lavrov, Artur; Kurnitski, Jarek; Vinnikov, Dmitri 2025 IEEE Seventh International Conference on DC Microgrids (ICDCM) 2025 / 5 p

Feasibility study of three-phase modular converter for dual-purpose application in DC and AC microgrids

Roncero-Clemente, Carlos; **Husev, Oleksandr; Matiushkin, Oleksandr;** Gutierrez-Escalona, Javier; Barrero-Gonzalez, Fermin; **Vinnikov, Dmitri;** Strzelecki, Ryszard IEEE journal of emerging and selected topics in power electronics 2024 / p. 1348-1358 <https://doi.org/10.1109/JESTPE.2023.3247960>

Flexible Cu(In,Ga)Se₂ on Al foils and the effects of Al during chemical bath deposition

Bremaud, D.; Rudmann, D.; Kaelin, M.; **Ernits, Kaia;** Bilger, G.; Döbeli, M.; Zogg, H.; Tiwari, A.N. Thin solid films 2007 / 15, p. 5857-5861 <https://www.sciencedirect.com/science/article/pii/S0040609006016087>

Flexible solar cells based on copper tape : hybrid organic-inorganic structures

Bereznev, Sergei; Kois, Julia; Mellikov, Enn; Öpik, Andres Proceedings of the IASTED International Conference Energy and Power Systems : March 29-31, 2006, Chiang Mai, Thailand 2006 / p. 161-164 : ill https://www.researchgate.net/publication/288789183_Flexible_solar_cells_based_on_copper_tape_Hybrid_organic-inorganic_structures

Formation and characterization of stable TiO₂/Cu_xO-based solar cells

Wis, Grzegorz; Sawicka-Chudy, Paulina; **Sibinski, Maciej;** Yavorskyi, Rostyslav; Łabuz, Mirosław; Płoch, Dariusz; Bester, Mariusz Materials 2023 / art. 5683, 15 p. : ill <https://doi.org/10.3390/ma16165683> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Formation and growth of Cu₂ZnSnS₄ monograin powder on molten Cd₂S = Cu₂ZnSnS₄ moodustumine ja monoterapulbri kasv Cd₂S sulafaasi keskkonnas

Nkwusi, Godswill 2017 <https://digi.lib.ttu.ee/ii/?7690> https://www.ester.ee/record=b4678707*est

Formation of Cu₂ZnSnS₄ and Cu₂ZnSnSe₄ by chalcogenisation of electrochemically deposited precursor layers = Cu₂ZnSnSe₄ ja Cu₂ZnSnS₄ moodustumine elektrokeemiliselt sadestatud kihtide kalkogeniseerimisel

Lehner, Julia 2014 https://www.ester.ee/record=b3080859*est

Formation of properties of CuInSe₂ and Cu₂ZnSn(S,Se)₄ monograin powders synthesized in molten KI = Kaaliumjodiidsulandaja keskkonnas kasvatatud monoterapulbrite CuInSe₂ ja Cu₂ZnSn(S,Se)₄ omaduste kujundamine

Timmo, Kristi 2011

4.9 % efficient Sb₂S₃ solar cells from semi-transparent absorbers with fluorene-based thiophene terminated hole conductors

Mandati, Sreekanth; Juneja, Nimish; Katerski, Atanas; Jegorove, Aiste; Grzibovskis, Raitis; Vembris, Aivars; **Dedova, Tatjana; Spalatu, Nicolae;** Magomedov, Artiom; Karazhanov, Smagul; Getautis, Vytautas; **Krunks, Malle; Oja Acik, Ilona** ACS Applied Energy Materials 2023 / p. 3822–3833 <https://doi.org/10.1021/acsam.2c04097> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Further developments in CIS monograin layer solar cells technology

Altosaar, Mare; Danilson, Mati; Kauk, Marit; Krustok, Jüri; Mellikov, Enn; Raudoja, Jaan; Timmo, Kristi; Varema, Tiit Solar energy materials and solar cells 2005 / p. 25-32 : ill

Glass/ITO/In(O,S)/CuIn(S,Se)₂ solar cell with conductive polymer window layer

Kois, Julia; Bereznev, Sergei; Raudoja, Jaan; Mellikov, Enn; Öpik, Andres Solar energy materials and solar cells 2005 / p. 657-665 : ill <https://www.sciencedirect.com/science/article/abs/pii/S0927024804003836>

Glassy GaS: transparent and unusually rigid thin films for visible to mid-IR memory applications

Tverjanovich, Andrey; Khomenko, Maksym; **Bereznev, Sergei;** Fontanari, Daniele; Sokolov, Anton; Usuki, Takeshi; Ohara, Koji; Le Coq, David; Masselin, Pascal; Bychkov, Eugene Physical chemistry chemical physics 2020 / p. 25560–25573 <https://doi.org/10.1039/D0CP04697C> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Global MPPT for interleaved buck-boost DC-DC converter

Matiushkin, Oleksandr; Husev, Oleksandr; Fesenko, Artem; **Vinnikov, Dmitri** 2020 IEEE 61st International Scientific Conference

Grid-connected photovoltaic systems : an overview of recent research and emerging PV converter technology

Kouro, Samir; Leon, Jose I.; **Vinnikov, Dmitri**; Franquelo, Leopoldo G. IEEE industrial electronics magazine 2015 / p. 47-61 : ill <https://doi.org/10.1109/MIE.2014.2376976> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Growth and characterization of Cu₂Zn_{1-x}Fe_xSnS₄ thin films for photovoltaic applications

Trifiletti, Vanira; Tseberlidis, Giorgio; Colombo, Mario; Spinardi, Alberto; Luong, Sally; **Danilson, Mati**; **Grossberg, Maarja**; Fenwick, Oliver; Binetti, Simona Materials 2020 / art. 1471, 13 p. : ill <https://doi.org/10.3390/ma13061471> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Growth of CZTS-based monograins and their application to membrane solar cells

Mellikov, Enn; **Altosaar, Mare**; **Kauk-Kuusik, Marit**; **Timmo, Kristi**; **Meissner, Dieter**; **Grossberg, Maarja**; **Krustok, Jüri**; **Volobujeva, Olga** Copper zinc tin sulfide-based thin film solar cells 2015 / p. 289-309 : ill

Highly flexible single crystalline solar modules, the ideal solution for versatile building integrated photovoltaic

Meissner, Dieter TRATERMAT 2019 : XVI Congreso Internacional de Tratamientos Térmicos y de Superficie 2020 / p. 21-22 <https://dialnet.unirioja.es/servlet/articulo?codigo=7551145>

Hävinud tudengisatelliit Hämarik andis tegijatele väärtuslikke õppetunde

Vare, Kai err.ee 2024 [Hävinud tudengisatelliit Hämarik andis tegijatele väärtuslikke õppetunde](#)

Hybrid solar cells based on CuInS₂ and organic buffer-sensitizer layers

Bereznev, Sergei; Koeppel, R.; Konovalov, Igor; **Kois, Julia**; **Günes, S.**; **Öpik, Andres**; **Mellikov, Enn**; Sariciftci, N.S. Thin solid films 2006 / 15, p. 5759-5762 : ill

Hybrid solar cells based on inorganic thin film structures and conjugated polymers

Kois, Julia; **Bereznev, Sergei**; **Raudoja, Jaan**; **Mellikov, Enn**; **Öpik, Andres** Proceedings of SPIE 2005 / Optical materials and applications, p. 59460V-1 - 59460V-6 : ill

Hydrogen states in mixed-cation CuIn(1-x)Ga_xSe₂ chalcopyrite alloys : a combined study by first-principles density-functional calculations and muon-spin spectroscopy

Marinopoulos, Apostolos G.; Vilao, Rui C.; Alberto, Helena Vieira; Ribeiro, E. F. M.; Gil, J. M.; Mengyan, P. W.; Goeks, M. R.; **Kauk-Kuusik, Marit**; Lord, J. S. Philosophical magazine 2021 / p. 2412-2434 <https://doi.org/10.1080/14786435.2021.1972178> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Impact of blocking layers based on TiO₂ and ZnO prepared via direct current reactive magnetron sputtering on DSSC solar cells

Sibinski, Maciej; Sawicka-Chudy, Paulina; Wisz, Grzegorz; Gnida, Pawel; Schab-Balcerzak, Ewa; Wal, Andrzej; Yavorskyi, Rostyslav; Cholewa, Marian Scientific reports 2024 / art. 10676 <https://doi.org/10.1038/s41598-024-61512-6>

Impact of CdS annealing atmosphere on the performance of CdS-CdTe solar cell

Maticiuc, Natalia; **Spalatu, Nicolae**; **Mikli, Valdek**; **Hiie, Jaan** Applied surface science 2015 / p. 14-18 : ill <https://doi.org/10.1016/j.apsusc.2015.01.172> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Impact of Cu₂ZnSn(SexS_{1-x})₄ (x=0.3) compositional ratios on the monograin powder properties and solar cells

Muska, Katri; **Kauk-Kuusik, Marit**; **Grossberg, Maarja**; **Altosaar, Mare**; **Pilvet, Maris**; **Varema, Tiit**; **Timmo, Kristi**; **Volobujeva, Olga**; **Mere, Arvo** Thin solid films 2013 / p. 35-38 : ill <https://doi.org/10.1016/j.tsf.2012.10.031> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Impact of Li and K co-doping on the optoelectronic properties of CZTS monograin powder

Muska, Katri; **Timmo, Kristi**; **Pilvet, Maris**; **Kaupmees, Reelika**; **Raadik, Taavi**; **Mikli, Valdek**; **Grossberg-Kuusk, Maarja**; **Krustok, Jüri**; **Josepson, Raavo**; Lange, Sven; **Kauk-Kuusik, Marit** Solar energy materials and solar cells 2023 / art. 112182 : ill <https://doi.org/10.1016/j.solmat.2023.112182> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Impact of post-deposition treatments on properties of SnS films and solar cells grown by close-spaced sublimation technique [Online resource]

Spalatu, Nicolae; **Hiie, Jaan**; **Krunks, Malle** [2018 E-MRS Spring Meeting and Exhibit : Materials for energy and environment : Thin film chalcogenide photovoltaic materials : program] 2018 / A.PV.27 <https://www.european-mrs.com/thin-film-chalcogenide-photovoltaic-materials-emrs>

Impact of transformer turns ratio on the power losses and efficiency of the wide range isolated buck-boost converter for photovoltaic applications

Mashinchi Maheri, Hamed; **Vinnikov, Dmitri**; **Chub, Andrii**; **Sidorov, Vadim**; **Liivik, Elizaveta** Energies 2020 / art. 5645, 21 p <https://doi.org/10.3390/en13215645> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Implications of the negative capacitance observed at forward bias in nanocomposite and polycrystalline solar cells

Mora-Sero, Ivan; Bisquert, Juan; **Oja Acik, Ilona** Nano letters 2006 / 4, p. 640-650 <https://pubs.acs.org/doi/10.1021/nl052295q>

Improved amorphous silicon passivation layer for heterojunction solar cells with post-deposition plasma treatment

Neumüller, Alex; Sergeev, Oleg; Heise, Stephan J.; **Bereznev, Sergei; Volobujeva, Olga** Nano energy 2018 / p. 228-235 : ill <https://doi.org/10.1016/j.nanoen.2017.11.053> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Increased efficiency inside the CdTe solar cell absorber caused by plasmonic metal nanoparticles

Repän, Taavi; Pikker, Siim; Dolgov, Leonid; Loot, Ardi; **Hiie, Jaan; Krunks, Malle**; Sildos, Ilmo Energy procedia 2014 / p. 229-233 : ill <https://doi.org/10.1016/j.egypro.2013.12.032> Conference proceeding at Scopus Article at Scopus Article at WOS

Increasing PV hosting capacity in LV distribution networks using congestion control techniques

Shabbir, Noman 21st International Symposium "Topical problems in the field of electrical and power engineering. Doctoral school of energy and geotechnology. III" : Pärnu, Estonia, June 15-18, 2022 2022 / p. 87-88 https://www.ester.ee/record=b5504019*est

An indirect model predictive current control (CCS-MPC) for grid-connected single-phase three-level NPC quasi-z-source PV inverter

Pires Pimentel, Sergio; Husev, Oleksandr; Vinnikov, Dmitri; Roncero-Clemente, Carlos; **Stepenko, Serhii** 59th Annual International Scientific Conference on Power and Electrical Engineering : November 12, 13, 2018, Riga Technical University (RTUCON) : conference proceedings 2018 / 6 p. : ill <https://doi.org/10.1109/RTUCON.2018.8659840>

Inexpensive fluorene-based hole transporting material with terminated thiophene unit for efficient semi-transparent Sb2S3 solar cells

Jegorove, Aiste; **Mandati, Sreekanth; Juneja, Nimish; Katerski, Atanas**; Vembris, Aivars; Grzibovskis, Raitis; Getautis, Vytautas; **Dedova, Tatjana**; Magomedov, Artiom; **Spalatu, Nicolae**; Karazhanov, Smagul; **Krunks, Malle; Oja Acik, Ilona** Proceedings of International Conference on Hybrid and Organic Photovoltaics (HOPV22), València, Spain, 2022 May 19th - 25th 2022 <https://www.nanoge.org/proceedings/HOPV22/62596b7159d9502382511011>

Influence of alkali iodide fluxes on Cu2ZnSnS4 monograin powder properties and performance of solar cells

Timmo, Kristi; Pilvet, Maris; Muska, Katri; Altosaar, Mare; Mikli, Valdek; Kaupmees, Reelika; Josepson, Raavo; Krustok, Jüri; Grossberg-Kuusk, Maarja; Kauk-Kuusik, Marit Materials advances 2023 / p. 4509-4519 : ill <https://doi.org/10.1039/D3MA00444A> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Influence of conductive polymer deposition on photovoltaic properties of prospective inorganic photoabsorber CuInS2 in solar cell

Bereznev, Sergei; Kois, Julia; Mellikov, Enn; Öpik, Andres; Verbitsky, Anatoly; Vertsimakha, Yaroslav Proceedings of the Third IASTED Asian Conference Power and Energy Systems : April 2-4, 2007, Phuket, Thailand 2007 / p. 232-235 https://www.researchgate.net/publication/288795301_Influence_of_conductive_polymer_deposition_on_photovoltaic_properties_of_prospective_inorganic_photoabsorber_CuInS2_in_solar_cell

Influence of PH on the hydroxide impurities in chemically deposited CDS thin film

Üürike, Marvin; Maticiu, Natalia; Volobujeva, Olga; Spalatu, Nicolae; Hiie, Jaan The 14th International Conference of Young Scientists on Energy Issues : Kaunas, Lithuania, May 25-26, 2017 2017 / p. X-316 - X-323 : ill http://cyseni.com/archives/proceedings/Proceedings_of_CYSENI_2017.pdf

Influence of the secondary thermal annealing on the properties of CdTe/CdS:CdCl2:O2 structure

Yang, Wangjun; Spalatu, Nicolae; Maticiu, Natalia; Krunks, Malle; Hiie, Jaan Proceedings of 13th International Conference of Young Scientists on Energy Issues : CYSENI 2016 : May 26-27 2016, Kaunas, Lithuania 2016 / p. VII-220 - VII-225 : ill

Influence of vapour transport deposition conditions on properties of SB2SE3 thin film absorber and solar cells

Gopi, Sajeesh Vadakkedath; Spalatu, Nicolae; Katerski, Atanas; Krunks, Malle; Oja Acik, Ilona Graduate School of Functional Materials and Technology (GSFMT) Scientific Conference : abstracts 2022 / 18 l. [Graduate School of Functional Materials and Technology \(GSFMT\) Scientific Conference 2022](#)

In(OH)xSy thin films by chemical bath deposition

Dedova, Tatjana; Krunks, Malle Conference on Knowledge-based Materials and Technologies for Sustainable Chemistry : 1-5 June 2005, Tallinn, Estonia : abstract book 2005 / p. 82

In(OH)xSy õhukesed kiled keemilise vanni meetodil

Dedova, Tatjana; Krunks, Malle XXIX Eesti keemiapäevad : teaduskonverentsi ettekannete teesid = 29th Estonian Chemistry Days : abstracts of scientific conference 2005 / lk. 8

Investigation of the solar cell materials Cu(In,Ga)Se2 and Cu2ZnSnS4 with muon spin spectroscopy and density-functional calculations

Vilao, Rui C.; Marinopoulos, Apostolos G.; dos Santos, Diego Garcia; Alberto, Helena Vieira; Gil, Joao Campos; Mengyan, Patrick W.; **Kauk-Kuusik, Marit**; Lord, James; Weidinger, Alois Journal of applied physics 2024 / art. 055704

<https://doi.org/10.1063/5.0205837> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Investigation of the structural, optical and electrical properties of Cu₃BiS₃ semiconducting thin films

Yakushev, M. V.; Maiello, P.; Raadik, Taavi; Krustok, Jüri Energy procedia 2014 / p. 166-172 : ill

<https://doi.org/10.1016/j.egypro.2014.12.359> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Isothermal and two-temperature zone selenization of Mo layers

Kaupmees, Liina; Altosaar, Mare; Volobujeva, Olga; Raadik, Taavi; Grossberg, Maarja; Danilson, Mati; Mellikov, Enn;

Barvinski, Paul Advances in materials science and engineering 2012 / Article ID 345762. [11] p. : ill

https://www.researchgate.net/publication/258383467_Isothermal_and_Two-Temperature_Zone_Selenization_of_Mo_Layers

Kahe fotoelektrilise päikeseenergia kasutamise süsteemi (PS) analüüs esimese töötamisaasta andemete alusel.

Rakenduslikud soovitusel PS-i kasutamiseks

Saikovski, Valeri TEUK XVII : taastuvate energiaallikate uurimine ja kasutamine : seitsmeteistkümnenda konverentsi kogumik =

Investigation and usage of renewable energy sources : seventeenth conference proceedings : [2015 : Tartu] 2015 / lk. 70-79 : ill

Kas päiksepaneelid on Eestis mõistlikud? [Võrguväljaanne]

postimees.ee 2022 [Kas päiksepaneelid on Eestis mõistlikud?](#)

Kassikuld võib osutada elektroonikatööstuses kullast kallimaks

Kristmann, Katriin novaator.err.ee 2024 [Kassikuld võib osutada elektroonikatööstuses kullast kallimaks](#)

Kesterite monograins for solar cells and water splitting applications

Oueslati, Souhaib; Pilvet, Maris; Grossberg, Maarja; Kauk-Kuusik, Marit; Krustok, Jüri; Meissner, Dieter Thin solid films 2021

/ art. 138981 <https://doi.org/10.1016/j.tsf.2021.138981> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Kleenukesed päikeseelemendid aitaks vältida ränipaneele ootavat kriisi

Sibinski, Maciej novaator.err.ee 2024 [Kleenukesed päikeseelemendid aitaks vältida ränipaneele ootavat kriisi](#)

Kuidas valida oma kodule sobivad päikesepaneelid? [Võrguväljaanne]

Raadik, Taavi LõunaLeht 2022 / Lk. 15 <https://dea.digar.ee/article/lounaleht/2022/08/04/54>

Kuul saaks elektrit toota eestlaste päikeseplatatehnoloogiaga

Horisont 2020 / lk. 5 : fot http://www.ester.ee/record=b4708219*est

Kõnniteplaadid toodavad pealinnas päikeseenergiat [Võrguväljaanne]

Mariste, Külli pealinn.ee 2021 ["Kõnniteplaadid toodavad pealinnas päikeseenergiat "](#)

Kübeke hõbedat vase asemele päikesepepüünis

Vill, Ants Director. Inseneria 2021 / lk. 50-57 : fot <https://director.ee/2021/02/03/kubeke-hobedat-vase-asemele-paikesepepuunisse/>

http://www.ester.ee/record=b2336521*est

Large area bar coated TiO₂ electron transport layers for perovskite solar cells with excellent performance homogeneity

Mandati, Sreekanth; Dileep, K. Reshma; Veerappan, Ganapathy; Ramasamy, Easwaramoorthi Solar Energy 2022 / p. 258-268

<https://doi.org/10.1016/j.solener.2022.04.060>

LBIC characterisation of Cu₂ZnSn(S,Se)₄ monograin photovoltaic cells

Neubauer, Christian; Meissner, Dieter Photovoltaic Technical Conference From Advanced Materials and Processes to Innovative

Applications : 2015 May 27-29, Aix-en-Provence 2015 / [2] p : ill

Low-cost plasmonic solar cells prepared by chemical spray pyrolysis

Kärber, Erki; Katerski, Atanas; Oja Acik, Ilona; Mikli, Valdek; Mere, Arvo; Sildos, Ilmo; Krunks, Malle The Beilstein journal of

nanotechnology 2014 / p. 2398-2402 : ill <https://doi.org/10.3762/bjnano.5.249> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Low-power home PV systems with MPPT and PC control modes [Electronic resource]

Rosa, Carlos; Vinnikov, Dmitri; Romero-Cadaval, Enrique; Pires, Vitor; Martins, Joao CPE 2013 : 2013 International Conference on Compatibility and Power Electronics (CPE) : June 5-7, 2013, Ljubljana, Slovenia : conference proceedings 2013 / p. 58-62 : ill [CD-ROM]

A luminescence study of Cu₂ZnSnSe₄/Mo/glass films and solar cells with near stoichiometric copper content

Yakushev, M. V.; Sulimov, M. A.; Marquez-Prieto, J.; Krustok, Jüri Journal of physics D : applied physics 2019 / art. 055502, 10 p. : ill

<https://doi.org/10.1088/1361-6463/aaefe3> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Manganese-substituted kesterite thin-films for earth-abundant photovoltaic applications

Trifiletti, Vanira; Frioni, Luigi; Tseberlidis, Giorgio; Vitiello, Elisa; **Danilson, Mati; Grossberg, Maarja**; Acciarri, Maurizio; Binetti, Simona; Marchionna, Stefano Solar energy materials and solar cells 2023 / art. 112247, 13 p. : ill
<https://doi.org/10.1016/j.solmat.2023.112247> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Materials and technologies for photovoltaic applications from Estonia

Mellikov, Enn; Altosaar, Mare; Bereznev, Sergei; Kauk, Marit; Kois, Julia; Krustok, Jüri; Krunks, Malle; Varema, Tiit Proceedings of SPIE 2005 / Optical materials and applications, p. 59460X-1 - 59460X-9 : ill https://www.researchgate.net/profile/Mare-Altosaar/publication/252219854_Materials_and_technologies_for_photovoltaic_applications_from_Estonia/links/54e5e6520cf2cd2e028b39ca/Materials-and-technologies-for-photovoltaic-applications-from-Estonia.pdf

Materials and technologies for photovoltaic applications from Estonia

Mellikov, Enn; Altosaar, Mare; Kauk, Marit; Krustok, Jüri; Krunks, Malle; Varema, Tiit The Fourth International Conference on Advanced Optical Materials and Devices : (AOMD-4) : Tartu, Estonia, July 6-9, 2004 : abstracts 2004 / p. 45
https://www.researchgate.net/publication/252219854_Materials_and_technologies_for_photovoltaic_applications_from_Estonia

Maximizing energy harvest of the impedance source PV Microconverter under partial shading conditions

Vinnikov, Dmitri; Chub, Andrii; Liivik, Elizaveta; Blaabjerg, Frede; Kouro, Samir CPE-POWERENG 2018 : Conference program : 12th IEEE International Conference on Compatibility, Power Electronics and Power Engineering, 10-12 April, 2018, Doha, Qatar 2018 / 7 p.: ill <https://indd.adobe.com/view/bdbda104-4e24-4d7b-88b1-f84ccfd20748> <https://doi.org/10.1109/CPE.2018.8372556>

Measured hygrothermal performance of energy activated facade in cold climate

Talvik, Martin; Kalamees, Targo; Ilomets, Simo Journal of building physics 2025 / p. 1-27 <https://doi.org/10.1177/174425912413124>

Milleks meile uued päikesepaneelitehnoloogiad?

Grossberg, Maarja Sirp 2020 / lk. 33-34 : fot <https://sirp.ee/s1-artiklid/c21-teadus/milleks-meile-uued-paikesepaneelitehnoloogiad/>

Milline on päikeseenergia tulevik Eestis?

Puhm, Carl-Robert delfi.ee 2025 <https://arileht.delfi.ee/artikkel/120366098/video-milline-on-paikeseenergia-tulevik-eestis>

Millised kodumajale sobivad päikesepaneelid on kõige tootlikumad, kuidas neid paigaldada ja kust selleks raha leida?

rohe.geenius.ee 2022 [Millised kodumajale sobivad päikesepaneelid on kõige tootlikumad, kuidas neid paigaldada ja kust selleks raha leida?](#)

Millist päikesepaneeli valida? Vaatame, mida veebiturul pakutakse ja kui head need pakkumised on [Võrguväljaanne]

geenius.ee 2022 [Millist päikesepaneeli valida? Vaatame, mida veebiturul pakutakse ja kui head need pakkumised on](#)

Mission profile resolution impacts on the thermal stress and reliability of power devices in PV inverters

Sangwongwanich, Ariya; Zhou, D.; **Liivik, Elizaveta**; Blaabjerg, Frede Microelectronics reliability 2018 / p. 1003-1007
<https://doi.org/10.1016/j.microrel.2018.06.094>

Mission profile-based accelerated testing of DC-link capacitors in photovoltaic inverters

Sangwongwanich, Ariya; Shen, Yanfeng; **Chub, Andrii; Liivik, Elizaveta; Vinnikov, Dmitri**; Wang, Huai; Blaabjerg, Frede Thirty-Fourth Annual IEEE Applied Power Electronics Conference and Exposition, March 17 – 21, 2019, Anaheim, California 2019 / p. 2833-2840 : ill <https://doi.org/10.1109/APEC.2019.8721794> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Mo pinna eeltötluste mõju MoSe2 omadustele

Kaupmees, Liina; Pilvet, Maris; Altosaar, Mare XXIX Eesti keemiapäevad : teaduskonverentsi ettekannete teesid = 29th Estonian Chemistry Days : abstracts of scientific conference 2005 / lk. 36-37

Model predictive control of photovoltaic bidirectional dc-dc converter with coupled inductors

Khomenko, Maksym; Veligorskyi, Oleksandr; **Husev, Oleksandr**; Tytelmaier, Kostiantyn; Yershov, Roman 2017 IEEE First Ukraine Conference on Electrical and Computer Engineering (UKRCON) : May 29 - June 2, 2017, Kyiv, Ukraine : conference proceedings 2017 / p. 578-583 : ill <https://doi.org/10.1109/UKRCON.2017.8100308>

Modelling of Cu₂ZnSnSe₄-CdS-ZnO thin film solar cell

Ben Messaoud, Khaled; Brammertz, Guy; Buffière, Marie; **Oueslati, Souhaib** Materials research express 2017 / art. 116403, 13 p. : ill <http://dx.doi.org/10.1088/2053-1591/aa94f3>

Monograin layer solar cells

Altosaar, Mare; Jagomägi, Andri; Kauk, Marit; Krunks, Malle; Krustok, Jüri; Mellikov, Enn; Raudoja, Jaan; Varema, Tiit Thin solid films 2003 / p. 466-469 : ill

A multi-layer Cu:Ga/In sputtered precursor to improve structural properties of CIGS absorber layer

Misra, Prashant; **Mandati, Sreekanth**; Rao, Tata Naransinga; Sarada, Bulusu V. Materials today: proceedings 2021 / p. 2037-2041 : ill <https://doi.org/10.1016/j.matpr.2020.09.545>

Mõne aasta pärast tuleb kõigile uutele majadele paigaldada päikesepaneelid

Naatriumiga legerimise mõju monoterapulbrilise CuInSe₂ omadustele

Timmo, Kristi; Altosaar, Mare; Raudoja, Jaan; Danilson, Mati; Grossberg, Maarja XXIX Eesti keemiapäevad : teaduskonverentsi ettekannete teesid = 29th Estonian Chemistry Days : abstracts of scientific conference 2005 / lk. 111-112

Nano-scale sulfurization of the Cu₂ZnSnSe₄ crystal surface for photovoltaic applications

Kauk-Kuusik, Marit; Li, Xiaofeng; Pilvet, Maris; Timmo, Kristi; Mikli, Valdek; Kaupmees, Reelika; Danilson, Mati; Grossberg, Maarja Journal of materials chemistry A 2019 / p. 24884-24890 : ill <https://doi.org/10.1039/C9TA08020A> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Nanostructured solar cell based on spray pyrolysis deposited ZnO nanorod array

Krunk, Malle; Katerski, Atanas; Dedova, Tatjana; Oja Acik, Ilona; Mere, Arvo Solar energy materials & solar cells 2008 / p. 1016-1019 : ill <https://www.sciencedirect.com/science/article/pii/S0927024808000871>

Nanostructured solar cells on ZnO nanorods by chemical spray

Krunk, Malle Book of Abstracts of 2nd Semiconductor Sensitized Solar Cells Conference : September 18th-20th, 2011, Mallorca, Spain 2011 / p. A2.4

Three-level neutral-point-clamped quasi-Z-source inverter with maximum power point tracking for photovoltaic systems

Roncero-Clemente, Carlos; Stepenko, Serhii; **Husev, Oleksandr**; Minambres-Marcos, Victor; Romero-Cadaval, Enrique; **Vinnikov, Dmitri** Technological innovation for the Internet of things : 4th IFIP WG 5.5/SOCOLNET Doctoral Conference on Computing, Electrical and Industrial Systems : DoCEIS 2013 : Costa de Caparica, Portugal, April 15-17, 2013 : proceedings 2013 / p. 334-342 https://doi.org/10.1007/978-3-642-37291-9_36 https://link.springer.com/chapter/10.1007/978-3-642-37291-9_36 [Article collection metrics at Scopus](#) [Article at Scopus](#)

A non-vacuum dip coated SiO₂ interface layer for fabricating CIGS solar cells on stainless steel foil substrates

Misra, Prashant; Atchuta, S. R.; **Mandati, Sreekanth**; Sarada, Bulusu V.; Rao, Tata Naransinga; Sakthivel, S. Solar energy 2021 / p. 471-477 : ill <https://doi.org/10.1016/j.solener.2020.12.007>

Novel approach immune to partial shading for photovoltaic energy harvesting from building integrated PV (BIPV) solar roofs

Chub, Andrii; Korkh, Oleksandr; Kosenko, Roman; Vinnikov, Dmitri 2018 20th European Conference on Power Electronics and Applications (EPE'18 ECCE Europe) : Riga, Latvia, 17-21 September 2018 2018 / p. 2243-2252 : ill <https://ieeexplore.ieee.org/document/8515623>

Novel Cu₂CdSnS₄ and Cu₂ZnGeSe₄ absorber materials for monograin layer solar cell application

Timmo, Kristi; Kauk-Kuusik, Marit; Altosaar, Mare; Raudoja, Jaan; Raadik, Taavi; Grossberg, Maarja; Varema, Tiit; Pilvet, Maris; Leinemann, Inga; Volobujeva, Olga; Mellikov, Enn EU PVSEC proceedings 2013 / p. 2385-2388 : ill

A novel hysteresis power point optimizer for distributed solar power generation

Veligorskyi, Oleksandr; **Husev, Oleksandr; Kosenko, Roman; Vinnikov, Dmitri** Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2018 / p. 12-22 : ill <https://doi.org/10.2478/ecce-2018-0002>

Novel materials for future PV technologies [Online resource]

Krunk, Malle International Conference "Functional Materials and Nanotechnologies 2017" : Tartu, Estonia in April, 24-27, 2017 : book of abstracts 2017 / p. 36 http://www.ester.ee/record=b4668793*est

Novel SiO_xN_y protective coatings with aligned carbon nanotubes network

Shmagina, Elizaveta; Volobujeva, Olga; Mikli, Valdek; Bereznev, Sergei Symposium E : Carbon- and/or nitrogen-containing thin films and nanomaterials : 40th Anniversary 2023 / art. 00680 <https://srv3.key4events.com/key4register/AbstractList.aspx?e=31&preview=1&aig=-1&ai=1968>

A novel thermochemical metal halide treatment to high-performance Sb₂Se₃ photocathode

Polivtseva, Svetlana; Adegite Olanrewaju, Joseph; Kois, Julia; Mamedov, Damir; Zh. Karazhanov, Smagul; Maricheva, Jelena; Volobujeva, Olga Nanomaterials 2021 / art. 52, 14 p <https://doi.org/10.3390/nano11010052> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Novel universal power electronic interface for integration of pv modules and battery energy storages in residential DC microgrids

Sidorov, Vadim; Chub, Andrii; Vinnikov, Dmitri; Lindvest, Andre IEEE Access 2023 / p. 30845-30858 <https://doi.org/10.1109/ACCESS.2023.3260640> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Numerical and experimental indication of thermally activated tunneling transport in CIS monograin layer solar cells

Cernivec, Gregor; **Jagomägi, Andri**; Smole, Franc; Topic, Marco Solid state electronics 2008 / 1, p. 78-85 <https://www.sciencedirect.com/science/article/pii/S0038110107002225>

Nutikas teekatend teeb liikluse jalakäijatele ohutumaks

Mente et Manu 2019 / lk. 28 : fot https://www.ttu.ee/public/m/mente-et-manu/MM_05_2019/mobile/index.html
https://www.ester.ee/record=b1242496*est

Nutikas teekatend võib jõuda peagi tänavale

Ehitaja 2021 / lk. 26

Nutikast teekattest lõikab enim kasu kergliikleja

Lahi, Allan; Kendra, Ain Teeleht 2021 / lk. 22-25 : fot https://www.mnt.ee/sites/default/files/road_paper_pdf/teeleht_kevad_2021_veeb.pdf
https://www.ester.ee/record=b1073043*est

Observation of photoluminescence edge emission in CuSbSe₂ absorber material for photovoltaic applications

Penežko, Aleksei; Kauk-Kuusik, Marit; Volobujeva, Olga; Traksmäa, Rainer; Grossberg, Maarja Applied physics letters 2019 / art. 092101, 4 p. : ill <https://doi.org/10.1063/1.5114893> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

One-source PVD of n-CuIn₅Se₈ photoabsorber films for hybrid solar cells

Bereznev, Sergei; Adhikari, Nirmal; Kois, Julia; Raadik, Taavi; Traksmäa, Rainer; Volobujeva, Olga; Kouhiisfahani, Elham; Õpik, Andres Solar energy 2013 / p. 202-208 : ill <https://doi.org/10.1016/j.solener.2013.04.027> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Optical and structural properties of orthorhombic and tetragonal polymorphs of Cu₂CdGeSe₄

Grossberg, Maarja; Raadik, Taavi; Krustok, Jüri; Kauk-Kuusik, Marit; Timmo, Kristi; Kaupmees, Reelika; Mikli, Valdek; Mere, Arvo Thin solid films 2018 / p. 44-47 <https://doi.org/10.1016/j.tsf.2018.09.031> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Optical spectroscopy studies of Cu₂ZnSnSe₄ thin films

Yakushev, M. V.; Forbes, I.; Mudryi, A. V.; Grossberg, Maarja; Krustok, Jüri; Beattie, N. S.; Moynihan, M.; Rockett, A.; Martin, R. W. Thin solid films 2015 / p. 154-157 : ill <https://doi.org/10.1016/j.tsf.2014.09.010> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Optimization of the Sb₂S₃ shell thickness in ZnO nanowire-based extremely thin absorber solar cells

Hector, Guislain; Eensalu, Jako Siim; Katerski, Atanas; Oja Acik, Ilona; Kärber, Erki Nanomaterials 2022 / art. 198 <https://doi.org/10.3390/nano12020198> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Optimization of VTD Sb₂Se₃ absorber growth rate in CdS/Sb₂Se₃ thin film solar cells : A defect perspective on chloride vs non-chloride based devices

Gopi, Sajeesh Vadakkedath; Krautmann, Robert; Katerski, Atanas; Josepson, Raavo; Untila, Dumitru; Hiie, Jaan; Krunks, Malle; Oja Acik, Ilona; Spalatu, Nicolae Solar energy materials and solar cells 2025 / art. 113856 <https://doi.org/10.1016/j.solmat.2025.113856>

Output voltage regulation of isolated PV-vonnected boost converters with variable loads using converted hysteresis sliding mode controller

Zolfaghari, Mahdi; Zolfaghari, A.; Gharehpetian, Gevork B.; Ahmadihangar, Roya; Rosin, Argo 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 7 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227386>

Partii päikesepaneele võib hukka minna ka paari liigse soojakraadiga

Harrik, Airika novaator.err.ee 2023 [Partii päikesepaneele võib hukka minna ka paari liigse soojakraadiga](https://www.ester.ee/record=b5685615*est)

Paul hakkab inseneriks

Tomusk, Ilmar 2024 https://www.ester.ee/record=b5685615*est

Performance of a building integrated semitransparent photovoltaic facade on a residential house in Northern Europe

Jagomägi, Andri; Wimmer, Andreas; Thalfeldt, Martin EU PVSEC 2017 : 33rd European Photovoltaic Solar Energy Conference and Exhibition : 25-29 September 2017, Amsterdam, The Netherlands 2017 / p. 2537-2547 <http://dx.doi.org/10.4229/EUPVSEC20172017-6BV.3.46>

Photo-assisted electrodeposition of polypyrrole back contact to CdS/CdTe solar cell structures

Jarkov, Aleksandr; Bereznev, Sergei; Volobujeva, Olga; Traksmäa, Rainer; Tverjanovich, Andrey; Õpik, Andres; Mellikov, Enn Thin solid films 2013 / p. 198-201 : ill <https://doi.org/10.1016/j.tsf.2013.01.064> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Photo-assisted electrodeposition of polypyrrole back contact to CdS/CdTe solar cell structures

Jarkov, Aleksandr; Bereznev, Sergei; Kois, Julia; Volobujeva, Olga; Õpik, Andres E-MRS Spring Meeting 2012 - Symposium B : Strasbourg, France, May 14-18, 2012 : program and abstract book 2012 / p. 8

Photoelectrical properties of $\text{In}(\text{OH})_x\text{Sy}/\text{PbS}(\text{O})$ structures deposited by SILAR on TiO_2

Oja Acik, Ilona; Belaidi, A.; Dolczik, L. Semiconductor science and technology 2006 / 4, p. 520-526 : ill
<https://iopscience.iop.org/article/10.1088/0268-1242/21/4/018>

Photoelectrochemical properties and band positions of Cd-substituted tetrahedrite $\text{Cu}_{10}\text{Cd}_2\text{Sb}_4\text{S}_{13}$ monograin materials grown in molten CdI_2 and LiI

Ghisani, Fairouz; Timmo, Kristi; Altosaar, Mare; Oueslati, Souhaib; **Pilvet, Maris; Kauk-Kuusik, Marit** Thin Solid Films 2022 / art. 139030 <https://doi.org/10.1016/j.tsf.2021.139030> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Photoluminescence and AFM study of WS_2 monolayers

Kaupmees, Reelika; Madauß, Lukas; Pollmann, Erik; **Grossberg, Maarja; Krustok, Jüri** GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 41 <http://fmt.dk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

Photoluminescence study of disordering in the cation sublattice of $\text{Cu}_2\text{ZnSnS}_4$

Grossberg, Maarja; Krustok, Jüri; Raadik, Taavi; Kauk-Kuusik, Marit; Raudoja, Jaan Current applied physics 2014 / p. 1424-1427 : ill <https://doi.org/10.1016/j.cap.2014.08.013> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Photoluminescence study of some solar cell materials

Hjelt, Kari; Collan, Heikki; **Krustok, Jüri; Mädasson, Jaan** XXIX Annual Conference of the Finnish Physical Society : proceedings 1995 / p. 7.33

Photorefectance and photoluminescence study of antimony selenide crystals

Kondrotas, Rokas; Nedzinskas, Ramunas; **Krustok, Jüri; Grossberg-Kuusik, Maarja;** Talaikis, Martynas; Tumėnas, Saulius; Suchodolskis, Arturas; Žaltauskas, Raimundas; Sereika, Raimundas ACS Applied Energy Materials 2022 / p. 14769-14778
<https://doi.org/10.1021/acsaem.2c02131> [Journal metrics at Scopus](#) [Article at scopus](#) [Journal metrics at WOS](#) [Article at Scopus](#)

Photovoltaic energy yield improvement in two-stage solar microinverters

Chub, Andrii; Vinnikov, Dmitri; Stepenko, Serhii; Liivik, Elizaveta; Blaabjerg, Frede Energies 2019 / art. 3774, 17 p. : ill
<https://doi.org/10.3390/en12193774> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Photovoltaic module characteristic influence on reliability of micro-inverters

Sangwongwanich, Ariya; **Liivik, Elizaveta; Blaabjerg, Frede** 2018 IEEE 12th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG 2018) : Doha, Qatar, 10-12 April 2018 2018 / p. 478-483 : ill
<https://doi.org/10.1109/CPE.2018.8372565>

Photovoltaic structures formed by thermal annealing of electrodeposited CuInSe_2 in H_2S

Kois, Julia; Bereznev, Sergei; Mellikov, Enn; Öpik, Andres Proceedings of the Estonian Academy of Sciences. Chemistry 2003 / 2, p. 51-58 : ill

Photovoltaics based on semiconductor powders

Meissner, Dieter The Proceedings of the 1st International Porous and Powder Materials Symposium and Exhibition PPM 2013 : 3-6 September 2013 Çeşme Izmir-TURKEY 2013 / p. 405-416 : ill

Photovoltaics based on semiconductor powders

Meissner, Dieter Materials and processes for energy : communicating current research and technological developments [E-book] 2013 / p. 114-125 : ill <http://www.formatex.info/energymaterialsbook/chapters.html>

Physical routes for the synthesis of kesterite

Ratz, T.; Brammertz, Guy; Caballero, R.; **Timmo, Kristi** Journal of Physics Energy 2019 / art. 042003, 23 p. : ill
<https://doi.org/10.1088/2515-7655/ab281c>

Pihustuspürolüüsi meetodil vaserikastest lahustest valmistatud CuInS_2 kilede omadused

Rebane, Helen; Kijatkina, Olga; Mikli, Valdek; Leomar, Hedi; **Krunks, Malle** XXVIII Eesti keemiapäevad : teaduskonverentsi ettekannete teesid = 28th Estonian Chemistry Days : abstracts of scientific conference 2002 / lk. 111

A PL and PLE study of high Cu content $\text{Cu}_2\text{ZnSnSe}_4$ films on Mo/Glass and solar cells

Sulimov, Mikhail A.; Yakushev, Michael V.; Forbes, I.; Prieto, J.M.; **Krustok, Jüri;** Edwards, P. R.; Martin, R.W. Physics of the solid state 2019 / p. 908-917 <https://doi.org/10.1134/S1063783419050214> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Plasmon-enhanced photocurrent by gold nanoparticles on extremely thin solar cells by chemical spray pyrolysis

Kärber, Erki; Katerski, Atanas; Oja Acik, Ilona; Mere, Arvo; Krunks, Malle Nanotechnology for Next Generation High Efficiency Photovoltaics : Spring International School & Workshop, Mao, Menorca, Balearic Islands (Spain), April 20-24, 2015 : book of abstracts 2015 / [1] p

Plasmonic control of light in thin film solar cell absorbers

Rep  n, Taavi; **Katerski, Atanas; Oja Acik, Ilona; K  rber, Erki; Mere, Arvo; Mikli, Valdek; Krunks, Malle**; Dolgov, Leonid; Sildos, Ilmo The International Summer School "Nanotechnology : from fundamental research to innovations" and International research and practice conference "Nanotechnology and nanomaterials" (NANO-2014), 23-30 August, 2014, Yaremche-Lviv, Ukraine : book of abstracts 2014 / p. 494

Plasmonic effect of Au NPs on CSS CdS/CdTe solar cell characteristics

Spalatu, Nicolae; Maticiu, Natalia; Katerski, Atanas; Krunks, Malle; Mikli, Valdek; Hiie, Jaan Science and Applications of Thin Films, SATF 2014 : Cesme, Izmir, Turkey, September 15-19 : abstract book 2014 / p. 371

Plasmonic effect of spray-deposited Au nanoparticles on the performance of CSS CdS/CdTe solar cells

Spalatu, Nicolae; Hiie, Jaan; Maticiu, Natalia; Krunks, Malle; Katerski, Atanas; Mikli, Valdek; Sildos, Ilmo Applied surface science 2015 / p. 69-73 : ill <https://doi.org/10.1016/j.apsusc.2015.04.065> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Plasmonic enhancement of light absorption in CuInS₂ layer doped by gold nanoparticles

Rep  n, Taavi; **Katerski, Atanas; Oja Acik, Ilona; K  rber, Erki; Mere, Arvo; Mikli, Valdek; Krunks, Malle**; Dolgov, Leonid; Sildos, Ilmo META'14 - Singapore : The 5th International Conference on Metamaterials, Photonic Crystals and Plasmonics : book of abstracts 2014

p-n junction improvements of Cu₂ZnSnS₄/CdS monograin layer solar cells

Kauk-Kuusik, Marit; Timmo, Kristi; Danilson, Mati; Altosaar, Mare; Grossberg, Maarja; Ernits, Kaia Applied surface science 2015 / p. 795-798 : ill <https://doi.org/10.1016/j.apsusc.2015.09.094> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Polypyrrole back contact to CDS/CDTE solar cell structures by photo-assisted electrodeposition technique

Jarkov, Aleksandr; Bereznev, Sergei; Kois, Julia; Volobujeva, Olga;   pik, Andres Baltic Polymer Symposium 2012 : Liepaja, Latvia, September 19-22 : programme and proceedings 2012 / p. 42

Polypyrrole back-contact to CdS/CdTe solar cell

Bereznev, Sergei; Jarkov, Aleksandr; Kois, Julia; Volobujeva, Olga; Mellikov, Enn;   pik, Andres 11th International Symposium on Functional π -electron systems (F π -11) : June 2-7, 2013, Arcachon, France : book of abstracts 2013 / p. 164

Post deposition annealing effect on properties of CdS films and its impact on CdS/Sb₂Se₃ solar cells performance

Gopi, Sajeesh Vadakkedath; Spalatu, Nicolae; Basnayaka, Madhawa; Krautmann, Robert; Katerski, Atanas; Josepson, Raavo; Grzibovskis, Raitis; Vembris, Aivars; **Krunks, Malle; Oja Acik, Ilona** Frontiers in Energy Research 2023 / art. 1162576, 12 p <https://doi.org/10.3389/fenrg.2023.1162576> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Post-deposition processing for tuning the properties of Sb₂Se₃ thin films absorber layer grown by close-spaced sublimation

Krautmann, Robert; Spalatu, Nicolae; Hiie, Jaan; Katerski, Atanas; Oja Acik, Ilona; Krunks, Malle GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 47 <http://fmdtk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

Postdeposition processing of SnS thin films and solar cells : prospective strategy to obtain large, sintered, and doped SnS grains by recrystallization in the presence of a metal halide flux

Spalatu, Nicolae; Hiie, Jaan; Kaupmees, Reelika; Volobujeva, Olga; Krustok, J  ri; Oja Acik, Ilona; Krunks, Malle ACS applied materials & interfaces 2019 / p. 17539-17554 : ill <https://doi.org/10.1021/acsami.9b03213> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Post-growth annealing effect on the performance of Cu₂ZnSnSe₄ monograin layer solar cells

Kauk-Kuusik, Marit; Altosaar, Mare; Muska, Katri; Pilvet, Maris; Raudoja, Jaan; Timmo, Kristi; Varema, Tiit; Grossberg, Maarja; Mellikov, Enn; Volobujeva, Olga Thin solid films 2013 / p. 18-21 : ill <https://doi.org/10.1016/j.tsf.2012.11.075> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Potential fluctuations in Cu₂ZnSnSe₄ solar cells studied by temperature dependence of quantum efficiency curves

Krustok, J  ri; Josepson, Raavo; Raadik, Taavi; Danilson, Mati Physica B : condensed matter 2010 / 15, p. 3186-3189 : ill

Powder materials and technologies for solar cells

Mellikov, Enn; Hiie, Jaan; Altosaar, Mare International journal of materials & product technology 2007 / 3/4, p. 291-311 : ill

Power supply system based on photovoltaic panels and three-level NPC inverter

Shults, Tatiana Doctoral School of Energy and Geotechnology II : closing conference of the project : P  rnu, Estonia, January 12-17, 2015 2015 / p. 154-157 : ill

Preparation and impedance spectroscopy of hybrid structures based on CuIn[Se] photoabsorber = H  briidsete CuIn[Se]

fotoabsorberstruktuuride valmistamine ja impedantsispektroskoopia

Laes, Kristjan 2010 https://www.ester.ee/record=b2580322*est

Preparation of CuInSe₂ thin films by using various methods : (a short review)

Soonmin, Ho; **Mandati, Sreekanth**; Chandran, Ramkumar; Mallik, Archana; Bhuiyan, M. A. S.; Deepa, K. G. Oriental journal of chemistry 2019 / p. 01-13 : ill [http://eprints.intimal.edu.my/1267/1/CuInSe₂%20thin%20films%20by%20uisng%20various%20methods_Ho.pdf](http://eprints.intimal.edu.my/1267/1/CuInSe2%20thin%20films%20by%20uisng%20various%20methods_Ho.pdf)

Producing pyrite based solar panels for the future lunar habitat

Kristmann, Katriin; Raadik, Taavi; Heemskerk, Marc Vincent; Woods, Arthur; Vogel, Andreas; Collins, Patrick; Gasperovics, Dimitrijs; Makaya, Advenit IAF Space Power Symposium : held at the 75th International Astronautical Congress (IAC 2024) : Milan, Italy, 14-18 October 2024 2024 / p. 312 - 317 <https://doi.org/10.52202/078370-0035> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Production monitoring system development for manufacturing processes of photovoltaic modules

Tšukrejev, Pavel; Kruuser, Kaarel; Karjust, Kristo Proceedings of the Estonian Academy of Sciences 2019 / p. 401-406 : ill <https://doi.org/10.3176/proc.2019.4.09> http://www.kirj.ee/32721/?tpl=1061&c_tpl=1064 [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Professor Maarja Grossberg-Kuusk : teaduses on salapära [Võrguväljaanne]

Kütt, Kadri director.ee 2022 [Professor Maarja Grossberg-Kuusk: teaduses on salapära](#)

The Promise of Operational Stability in Pnictogen-Based Perovskite-Inspired Solar Cells

Lamminen, Noora; Karlsson, Joshua; Kumar, Ramesh; Viswanath, N. S. M.; Lal, Snigdha; Fasulo, Francesca; Righetto, Marcello; Krishnaiah, Mokurala; **Katerski, Atanas; Oja Acik, Ilona** EES Solar 2025 <https://doi.org/10.1039/D5EL00029G> <https://pubs.rsc.org/en/content/articlepdf/2025/el/d5el00029g>

Properties of Cu-Sb-Se thin films deposited by magnetron co-sputtering for solar cell applications

Penežko, Aleksei; Kauk-Kuusik, Marit; Volobujeva, Olga; Grossberg, Maarja Thin solid films 2021 / art. 139004 <https://doi.org/10.1016/j.tsf.2021.139004> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Properties of NiO thin film deposited spray pyrolysis

Chen, Zengjun; Dedova, Tatjana; Oja Acik, Ilona; Krunks, Malle GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 18 <http://fntdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

Properties of the CdCl₂ air-annealed CSS CdTe thin films

Spalatu, Nicolae; Hiie, Jaan; Valdna, Vello; Maticiu, Natalia; Krunks, Malle; Mikli, Valdek TÜ ja TTÜ doktorikool "Funktsionaalsed materjalid ja tehnoloogiad" : 04.-05. märts 2014, Tartu 2014 / [1] p

Properties of the CdCl₂ air-annealed CSS CdTe thin films

Spalatu, Nicolae; Hiie, Jaan; Valdna, Vello; Caraman, Mihail; Maticiu, Natalia; Mikli, Valdek; Potlog, Tamara; Krunks, Malle; Lugh, Vanni Energy procedia 2014 / p. 85-95 : ill <https://doi.org/10.1016/j.egypro.2013.12.013> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Pulse electrodeposited zinc sulfide as an eco-friendly buffer layer for the cadmium-free thin-film solar cells

Boosagulla, Divya; **Mandati, Sreekanth**; Misra, Prashant; Allikayala, Ramachandraiah; Sarada, Bulusu V. Superlattices and microstructures 2021 / art. 107060 <https://doi.org/10.1016/j.spmi.2021.107060>

Pulsed laser deposition of Zn(O,Se) layers for optoelectronic application

Polivtseva, Svetlana; Spalatu, Nicolae; Abdalla, Akram; Volobujeva, Olga; Hiie, Jaan; Bereznev, Sergei ACS Applied Energy Materials 2018 / p. 6505–6512 : ill <http://dx.doi.org/10.1021/acsam.8b01431>

Pulsed laser deposition of Zn(O,Se) layers for optoelectronic applications

Ibrahim, Akram Abdalla Mohammed; Bereznev, Sergei GSFMT Scientific Conference 2021 : Tartu, June 14-15, 2021 : abstracts 2021 / O 13 https://fntdk.ut.ee/wp-content/uploads/2021/06/GSFMT_abstractbook_2021.pdf

Pulsed laser deposition of Zn(O,Se) layers for optoelectronic applications = Impulsslaser-sadestatud Zn(O,Se) kiled optoelektronseteks rakendusteks

Ibrahim, Akram Abdalla Mohammed 2021 <https://digikogu.taltech.ee/et/Item/0d07be7f-3737-4350-9de4-80f32df036de> https://www.ester.ee/record=b5470705*est <https://doi.org/10.23658/taltech.57/2021>

Pulsed laser deposition of Zn(O,Se) layers in nitrogen background pressure

Abdalla, Akram; Bereznev, Sergei; Spalatu, Nicolae; Volobujeva, Olga; Sleptšuk, Natalja; Danilson, Mati Scientific reports 2019 / art. 17443, 10 p. : ill <https://doi.org/10.1038/s41598-019-54008-1> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

PVD of n-CuIn₅Se₈ photoabsorber films for hybrid solar cells

Adhikari, Nirmal; Bereznev, Sergei; Kois, Julia; Volobujeva, Olga; Raadik, Taavi; Traksmäa, Rainer; Dahal, R.K.; Tverjanovich, Andrey; Õpik, Andres Baltic Polymer Symposium 2012 : Liepaja, Latvia, September 19-22 : programme and proceedings 2012 / p. 29

Päikeseelementid H₂S atmosfääris kuumutamise ja modifitseeritud elektrokeemiliselt sadestatud CuInSe₂ kilede baasil
Kois, Julia; Bereznev, Sergei; Mellikov, Enn; Õpik, Andres XXVIII Eesti keemiapäevad : teaduskonverentsi ettekannete teesid = 28th Estonian Chemistry Days : abstracts of scientific conference 2002 / lk. 59

Päikeseelementide uued materjalid ja konstruktsioonid : kommentaar Eesti Vabariigi teaduse aastapreemia pälvinud tööde tsüklile

Mellikov, Enn; Altosaar, Mare; Bereznev, Sergei; Õpik, Andres Tallinna Tehnikaülikooli aastaraamat 2006 2007 / lk. 262-267 : ill

Päikeseenergeetika tulevikku kujundavad kilepinnad ja tandempaneelid

Piir, Rait novaator.err.ee 2023 [Päikeseenergeetika tulevikku kujundavad kilepinnad ja tandempaneelid](#)

Päikeseenergeetika väljakutse : mis saab päikesepaneelidest elukaare lõpus?

Grossberg-Kuusk, Maarja postimees.ee 2024 [Päikeseenergeetika väljakutse: mis saab päikesepaneelidest elukaare lõpus?](#)

Päikesega saab kütta tuba ja vett, ilma paneele võrku ühendamata

Raamets, Heli maakodu.delfi.ee 2023 [Päikesega saab kütta tuba ja vett, ilma paneele võrku ühendamata](#)

Päikesepaneelid ja korteriühistud: müüdid vs. tegelikkus [Võrguväljaanne]

Raadik, Taavi kinnisvarauudised.ee 2022 [Päikesepaneelid ja korteriühistud: müüdid vs. tegelikkus](#)

Päikesepaneelid muutuvad järjest populaarsemaks ja põhjusega

Maaleht 2023 / Lk. 28 : fot <https://dea.digar.ee/article/maaleht/2023/01/12/57>

Päikesepaneelid sobivad ka kortermajale

Raadik, Taavi Võrumaa Teataja 2022 / Lk. 2 [Päikesepaneelid sobivad ka kortermajale](#)

Päikesepaneelide hind langeb ja kasutamine kasvab

Olup, Nele-Mai; Jagomägi, Andri Postimees 2015 / lk. 5 <https://www.postimees.ee/3435269/paikesepaneelide-hind-langeb-ja-kasutamine-eestis-kasvab>

Päikesepaneelidest tee : [Maanteeameti, TTÜ ja Tallinna Tehnikakõrgkooli koostöös väljatöötatud päikesepaneelidega varustatud teekatendist]

Aastaraamat / Maanteeamet 2017 / lk. 26 : ill http://www.ester.ee/record=b1293342*est

Päikeseplatereisid täiustav teadlane Atanas Katerski : teadustöö võtab 24/7, aga paneb ikkagi silma särava

Alvela, Ain teadus.postimees.ee 2023 [Päikeseplatereisid täiustav teadlane Atanas Katerski: teadustöö võtab 24/7, aga paneb ikkagi silma särava](#)

Pyrite as promising monograin layer solar cell absorber material for in-situ solar cell fabrication on the Moon

Kristmann, Katriin; Raadik, Taavi; Altosaar, Mare; Grossberg-Kuusk, Maarja; Krustok, Jüri; Pilvet, Maris; Mikli, Valdek; Kauk-Kuusik, Marit; Makaya, Advenit Acta Astronautica 2022 / P. 420-424 <https://doi.org/10.1016/j.actaastro.2022.07.043> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Pyrite as prospective monograin layer solar cell absorber material for in-situ solar cell fabrication on the Moon

Kristmann, Katriin; Raadik, Taavi; Altosaar, Mare; Grossberg, Maarja; Krustok, Jüri; Pilvet, Maris; Mikli, Valdek; Kauk-Kuusik, Marit IAC 2021 congress proceedings 2021 / p. 1-6 : ill <https://deepzone3.ttu.ee/~juri.krustok/PDF-s/IAC-21.C3.4.7.x64087.pdf> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Pyrite based solar panel in-situ production on the Moon for space-based solar power

Raadik, Taavi; Kristmann, Katriin; Ciazela, J.; Jozefowicz, M.; Kowalinski, M.; Sniadkowski, A.; Bakala, J.; Steslicki, M.; Zalewska, N.; Pieterek, B.; Ciazela, M.; Marciniak, D. IAC 2023 congress proceedings 2023 / 9 p. : ill <https://iafastro.directory/iac/paper/id/79277/abstract-pdf/IAC-23.D3.2B.6.x79277.brief.pdf?2023-03-30.12:16:44> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Pyrite FeS₂ solar cells fabrication for lunar base energy production

Kristmann, Katriin; Raadik, Taavi; Altosaar, Mare; Grossberg-Kuusk, Maarja; Krustok, Jüri; Pilvet, Maris; Mikli, Valdek; Kauk-Kuusik, Marit; Makaya, Advenit IAC 2022 congress proceedings 2022 / art. 190266 [Pyrite FeS₂ solar cells fabrication for lunar base energy production](#) [Conference proceedings at Scopus](#) [Article at Scopus](#)

Radiative recombination in Cu₂ZnSnSe₄ thin films with Cu deficiency and Zn excess

Yakushev, M. V.; Marquez-Prieto, J.; Forbes, I.; Edwards, P. R.; Zhivulko, V. D.; Mudryi, A. V.; **Krustok, Jüri**; Martin, R. W. Journal of physics D : applied physics 2015 / p. 1-7 : ill <https://doi.org/10.1088/0022-3727/48/47/475109> [Journal metrics at Scopus](#) [Article at](#)

Radiative recombination model for BiSel microcrystals : unveiling deep defects through photoluminescence
Dolcet Sadurni, Marc; Krustok, Jüri; Timmo, Kristi; Mikli, Valdek; Kondrotas, Rokas; Grossberg-Kuusk, Maarja; Kauk-Kuusik, Marit Journal of Physics Energy 2024 / art. 045004 <https://doi.org/10.1088/2515-7655/ad8377>

Rapid assessment of photovoltaic activity of perovskite solar cells by photoluminescence spectroscopy
Dileep, K. Reshma; Mandati, Sreekanth; Ramasamy, Easwaramoorthi; Mallick, S; Rao, Tata Naransinga; Veerappan, Ganapathy Materials letters 2021 / art. 130056, 4 p. : ill <https://doi.org/10.1016/j.matlet.2021.130056>

Rational design of highly efficient flexible and transparent p-type composite electrode based on single-walled carbon nanotubes
Rajanna, Pramod M.; Meddeb, Hosni; Bereznev, Sergei; Volobujeva, Olga; Danilson, Mati Nano energy 2020 / art. 104183, 9 p. : ill <https://doi.org/10.1016/j.nanoen.2019.104183> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Real-time monitoring of solar modules manufacturing
Tšukrejev, Pavel; Kruuser, Kaarel; Gorbachev, Georgy; Karjust, Kristo; Majak, Jüri International journal of engineering research in Africa 2020 / p. 9-13 <https://doi.org/10.4028/www.scientific.net/JERA.51.9> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Reduced recombination through the CZTS/CdS interface engineering in monograin layer solar cells
Kauk-Kuusik, Marit; Timmo, Kristi; Muska, Katri; Pilvet, Maris; Krustok, Jüri; Danilson, Mati; Mikli, Valdek; Josepson, Raavo; Grossberg, Maarja JPhys Energy 2022 / art. 024007 <https://doi.org/10.1088/2515-7655/ac618d> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Reliability analysis of micro-inverters considering PV module variations and degradation rates
Liivik, Elizaveta; Sangwongwanich, Ariya; Blaabjerg, Frede 20th European Conference on Power Electronics and Applications (EPE'18 ECCE Europe) : Riga, Latvia, 17-21 September 2018 2018 / p. 1475-1482 : ill <https://ieeexplore.ieee.org/document/8515325>

Reliability evaluation of an impedance-source PV microconverter
Shen, Yanfeng; Liivik, Elizaveta; Blaabjerg, Frede; Vinnikov, Dmitri; Wang, Huai; Chub, Andrii 17th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral school of energy and geotechnology. III : Kuressaare, Estonia, January 15-20, 2018 2018 / p. 108-110 : ill http://ise.elnet.ee/record=b2950026~S2*est

Reliability study of input side capacitors in impedance-source PV microconverters
Liivik, Elizaveta; Vinnikov, Dmitri; Chub, Andrii; Shen, Yanfeng IECON 2019 - 45th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2019 / p. 5026–5032 : ill <https://doi.org/10.1109/IECON.2019.8927173> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Research on materials for solar cells at Tallinn Technical University
Krunks, Malle Materials, abstracts of Sustainable Community Development Baltic Meeting Point, Uppsala, 1998 1998 / p. 4

Revolutsioon päikesepaneelide tootmises : [päikesepatareide tehnoloogiliste lahenduste arendustöödest TTÜs]
Tehnoloogia : TTÜ noorteajakiri 2013 / lk. 28 : ill

Routes to develop a $[S]/([S]+[Se])$ gradient in wide band-gap $Cu_2ZnGe(S,Se)_4$ thin-film solar cells
Ruiz-Perona, Andrea; Gurieva, Galina; Sun, Michael; Kodalle, Tim; Sanchez, Yudania; Grossberg, Maarja; Merino, Jose Manuel; Schorr, Susan; Leon, Maximo; Caballero, Raquel Journal of alloys and compounds 2021 / art. 159253, 9 p. : ill <https://doi.org/10.1016/j.jallcom.2021.159253> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Sammhaaval üha paremate päikesepatareide poole
Grossberg-Kuusk, Maarja Horisont 2024 / lk. 16-22 : fot https://www.ester.ee/record=b1072243*est

Sb₂S₃ grown by ultrasonic spray pyrolysis and its application in a hybrid solar cell
Kärber, Erki; Katerski, Atanas; Oja Acik, Ilona; Mere, Arvo; Mikli, Valdek; Krunks, Malle Beilstein journal of nanotechnology 2016 / p. 1662-1673 : ill <http://dx.doi.org/10.3762/bjnano.7.158>

Sb₂S₃ solar cells with a cost-effective and dopant-free fluorene-based enamine as a hole transport material
Juneja, Nimish; Mandati, Sreekanth; Katerski, Atanas; Spalatu, Nicolae; Daskeviciute-Geguziene, Sarune; Vembris, Aivars; Karazhanov, Smagul; Getautis, Vytautas; Krunks, Malle; Oja Acik, Ilona Sustainable Energy & Fuels 2022 / p. 3220-3229 <https://doi.org/10.1039/D2SE00356B> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Sb₂S₃ solar cells with TiO₂ electron transporting layers synthesized by ALD and USP methods
Dedova, Tatjana; Krautmann, Robert; Rusu, Marin; Katerski, Atanas; Krunks, Malle; Unold, Thomas; Spalatu, Nicolae; Mere, Arvo; Sydorenko, Jekaterina; Sibinski, Maciej; Oja Acik, Ilona Solar energy materials and solar cells 2025 / art. 113279 <https://doi.org/10.1016/j.solmat.2024.113279>

Sb2S3 thin films by ultrasonic spray pyrolysis of antimony ethyl xanthate

Eensalu, Jako Siim; Tõnsuaadu, Kaia; Oja Acik, Ilona; Krunks, Malle Materials science in semiconductor processing 2022 / art. 106209 : ill <https://doi.org/10.1016/j.mssp.2021.106209> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Sb2S3 thin-film solar cells fabricated from an antimony ethyl xanthate based precursor in air

Eensalu, Jako Siim; Mandati, Sreekanth; Don, Christopher H.; Finch, Harry; Dhanak, Vinod R.; Major, Jonathan D.; Grzibovskis, Raitis; Tamm, Aile; Ritslaid, Peeter; Josepson, Raavo; Käämbre, Tanel; Vembris, Aivars; Spalatu, Nicolae; Krunks, Malle; Oja Acik, Ilona ACS applied materials & interfaces 2023 / p. 42622-42636 <https://doi.org/10.1021/acsami.3c08547> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Sb2S3 õhukesed absorberkihid pool-läbipaistvatele päikesepatareidele

Oja Acik, Ilona; Eensalu, Jako Siim; Katerski, Atanas; Krunks, Malle XXXIV Eesti keemiapäevad : 100. aastapäeva teaduskonverentsi teesid 2019 / lk. 32 https://www.ester.ee/record=b1580289*est

Seal, kus lõpeb asfalt, algab nutitee

Kendra, Ain Sirp 2017 / lk. 30-31 : fot <http://www.sirp.ee/s1-artiklid/arhitektuur/seal-kus-lopeb-asfalt-algab-nutitee/>

Selenisation of sequentially electrodeposited Cu-Zn and Sn precursor layers

Iljina, Julia; Volobujeva, Olga; Raadik, Taavi; Revathi, Naidu; Raudoja, Jaan; Loorits, Mihkel; Traksmäa, Rainer; Mellikov, Enn Thin solid films 2013 / p. 14-17 : ill

A self-rechargeable and flexible polymer solar battery

Dennler, G.; Bereznev, Sergei; Meissner, Dieter; Mellikov, Enn; Öpik, Andres Solar energy 2007 / 8, p. 947-957 <https://www.sciencedirect.com/science/article/pii/S0038092X07000424>

Semitransparent Sb2S3 thin film solar cells by ultrasonic spray pyrolysis for use in solar windows

Eensalu, Jako Siim; Katerski, Atanas; Kärber, Erki; Weinhardt, Lothar; Blum, Monika; Heske, Clemens; Oja Acik, Ilona; Krunks, Malle Beilstein journal of nanotechnology 2019 / p. 2396-2409 <https://doi.org/10.3762/bjnano.10.230> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Single-phase qZS-based PV inverter with integrated battery storage for distributed energy generation

Husev, Oleksandr; Makovenko, Elena; Vinnikov, Dmitri; Jalakas, Tanel 12th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG 2018) : Doha, Qatar, 10-12 April 2018 / p. 508-513 : ill <https://doi.org/10.1109/CPE.2018.8372570>

Single-switch impedance-source galvanically isolated DC-DC converter with combined energy transfer

Chub, Andrii; Vinnikov, Dmitri; Babaei, Ebrahim; Liivik, Elizaveta; Korkh, Oleksandr; Kouro, Samir 59th Annual International Scientific Conference on Power and Electrical Engineering : November 12, 13, 2018, Riga Technical University (RTU CON) : conference proceedings 2018 / 6 p. : ill <https://doi.org/10.1109/RTU CON.2018.8659851>

Small signal modeling of interleaved quasi-z-source inverter with active power decoupling circuit

Stepenko, Serhii; Husev, Oleksandr; Pires Pimentel, Sergio; Makovenko, Elena; Vinnikov, Dmitri 59th Annual International Scientific Conference on Power and Electrical Engineering : November 12, 13, 2018, Riga Technical University (RTU CON) : conference proceedings 2018 / 6 p. : ill <https://doi.org/10.1109/RTU CON.2018.8659903>

SnS thin films deposition by chemical solution method and characterization = SnS õhukeste kilede sadestamine keemilisest lahusest ja saadud kilede iseloomustamine

Safonova, Maria 2016 https://www.ester.ee/record=b4535442*est

Solar cell on nanostructured ZnO by spray pyrolysis deposition

Katerski, Atanas; Dedova, Tatjana; Oja Acik, Ilona; Mere, Arvo; Krunks, Malle 2-nd International Conference on surfaces, Coatings and Nanostructured Materials (NANOSMAT 2007) : 9-11 July 2007, Alvor, Algarve, Portugal : abstracts book 2007 / p. 256

Solar cell structures based on sprayed CuInS2 absorber layer

Mere, Arvo; Krunks, Malle; Kijatkina, Olga Proceedings of the 20th Nordic Semiconductor Meeting : Optoelectronics Research Center, Tampere University of Technology, Tampere, Finland, August 25-27, 2003 2004

Solar cell structures by non-vacuum techniques based on sprayed CuInS2 absorber layers

Mere, Arvo; Katerski, M.; Kijatkina, Olga; Krunks, Malle 19th European Photovoltaic Solar Energy Conference : 7-11 June 2004, Paris, France 2004 / p. 1973-1976 : ill

Solar cells from TalTech to upsurge Internet of Things expansion

Sibinski, Maciej news.err.ee 2024 [Solar cells from TalTech to upsurge Internet of Things expansion](#)

Solar energy harvesting through photovoltaic and photoelectrochemical means from appositely prepared CuInGaSe₂ absorbers on flexible substrates by a low-cost and industrially benign pulse electrodeposition technique

Mandati, Sreekanth; Misra, Prashant; Boosagulla, Divya; Tata, Narasinga Rao; Bulusu, Sarada V. Industrial and engineering chemistry research 2021 / p. 2197–2205 <https://doi.org/10.1021/acs.iecr.0c05934>

Solar optiverter - a novel hybrid approach to the photovoltaic module level power electronics

Vinnikov, Dmitri; Chub, Andrii; Kosenko, Roman; **Korkh, Oleksandr** IEEE transactions on industrial electronics 2019 / p. 3869-3880 <https://doi.org/10.1109/TIE.2018.2850036> [Tehnikaülikooli seade muudab päikesepaneelid märgatavalt tootlikumaks](#) [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Solar PV Generation and Consumption Dataset of an Estonian Residential Dwelling

Hasan, Sayeed; Blinov, Andrei; Chub, Andrii; Vinnikov, Dmitri Scientific Data 2025 / art. 481 <https://doi.org/10.1038/s41597-025-04747-w>

Sol-gel derived phosphors for optical applications : chapter 11

Rojas Hernandez, Rocio Estefania; Santos, Luis F.; Almeida, Rui M. Sol-gel derived optical and photonic materials 2020 / p. 253-270 : ill <https://doi.org/10.1016/B978-0-12-818019-8.00011-9>

Solubility of CuInSe₂ in potassium iodide

Kauk, Marit; Timmo, Kristi; Altosaar, Mare; Raudoja, Jaan Conference on Knowledge-based Materials and Technologies for Sustainable Chemistry : 1-5 June 2005, Tallinn, Estonia : abstract book 2005 / p. 90

Spin - coating of SnO₂ thin films

Ganchev, Maxim; Katerski, Atanas; Stankova, Stanka; **Eensalu, Jako Siim;** Terziyska, Penka Journal of physics : conference series 2019 / art. 012027, 7 p. : ill <https://doi.org/10.1088/1742-6596/1186/1/012027> [Conference proceeding at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Sprayed CuInS₂ films grown under Cu-rich conditions as absorbers for solar cells

Krunks, Malle; Kijatkina, Olga; Mere, Arvo; Varema, Tiit; Oja, Ilona; Mikli, Valdek Solar energy materials & solar cells 2005 / p. 207-214 : ill

State coordinated voltage control in an active distribution network with on-load tap changers and photovoltaic systems

Singh, Praveen Prakash; Palu, Ivo Global Energy Interconnection 2021 / 9 p. : ill <https://doi.org/10.1016/j.gloi.2021.05.005> [Journal metrics at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

State-of-the-Art Review of Emerging Trends in Renewable Energy Generation Technologies

Tiismus, Hans; Maask, Vahur; Astapov, Victor; Korõtko, Tarmo; Rosin, Argo IEEE Access 2025 / p. 10820 - 10843 <https://doi.org/10.1109/ACCESS.2025.3528640>

Step-up current-source partial power converter for PV systems

Abdelrahim Abdelghafour, Omar Mohamed; Chub, Andrii; Blinov, Andrei; Vinnikov, Dmitri; Hassanpour, Naser IEEE 13th International Symposium on Power Electronics for Distributed Generation Systems (PEDG) 2022 / 6 l. <https://doi.org/10.1109/PEDG54999.2022.9923250>

Structural and compositional properties of CZTS thin films formed by rapid thermal annealing of electrodeposited layers

Lehner, Julia; Looerts, Mihkel; Revathi, Naidu; Raadik, Taavi; Raudoja, Jaan; Grossberg, Maarja; Mellikov, Enn; Volobujeva, Olga; Ganchev, Maxim Journal of crystal growth 2013 / p. 236-240 : ill <https://doi.org/10.1016/j.jcrysgro.2013.06.012> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Structural and mechanical properties of laminate-type thin film SWCNT/SiOxNy composites

Shmagina, Elizaveta; Volobujeva, Olga; Antonov, Maksim; Bereznev, Sergei SICT 2024, PLASMA TECH 2024 and TRIBOLOGY 2024 : JOINT international conferences : book of abstracts 2024 / p. 142 <https://www.setcor.org/conferences/tribology-2024/conference-program>

Structural and optoelectronic properties of CdCl₂ activated CdTe thin films modified by multiple thermal annealing

Spalatu, Nicolae; Krunks, Malle; Hiie, Jaan Thin solid films 2017 / p. 106-111 : ill <https://doi.org/10.1016/j.tsf.2016.09.042> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Structural, mechanical, and optical properties of laminate-type thin film SWCNT/SiOxNy composites

Shmagina, Elizaveta; Antonov, Maksim; Kasikov, Aarne; **Volobujeva, Olga;** Khabushev, Eldar M.; Kallio, Tanja; **Bereznev, Sergei** Nanomaterials 2024 / art. 1806 <https://doi.org/10.3390/nano14221806>

Study of composition and thermal treatments of quaternary compounds for monograin layer solar cells =

Päikesepatareides kasutatavate monoterapulbriliste nelikühendite koostise ja termotööstuste uurimine

Muska, Katri 2012 https://www.ester.ee/record=b2882895*est

Study of CZTS nano-powder synthesis by hot injection method by variation of Cu and Zn concentrations

Kumar, Suresh; Kumar, Vikash; Mikli, Valdek; Varema, Tiit; Altosaar, Mare; Grossberg, Maarja Energy procedia 2016 / p. 136-143 : ill <https://doi.org/10.1016/j.egypro.2016.11.328> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Study of Cu₂CdGeSe₄ monograin powders synthesized by molten salt method for photovoltaic applications

Kauk-Kuusik, Marit; Li, Xiaofeng; Pilvet, Maris; Timmo, Kristi; Grossberg, Maarja; Raadik, Taavi; Danilson, Mati; Mikli, Valdek; Altosaar, Mare; Krustok, Jüri; Raudoja, Jaan Thin solid films 2018 / p. 15-19 <https://doi.org/10.1016/j.tsf.2018.09.025> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Study of simple MPPT converter topologies for grid integration of photovoltaic systems

Zakis, Janis; Vinnikov, Dmitri Scientific journal of Riga Technical University. Serija 4, Power and electrical engineering 2011 / p. 67-72 : ill https://www.researchgate.net/publication/258547430_Study_of_Simple_MPPT_Converter_Topologies_for_Grid_Integration_of_Photovoltaic_Systems

Study of spray-CVD deposited Zn(O,S) films on Mo substrates and application in Cu(In, Ga)(S, Se)₂ solar cells as buffer layers

Kriisa, Merike; Fischer, Christian-Herbert; Krunks, Malle TÜ ja TTÜ doktorikool "Funktsionaalsed materjalid ja tehnoloogiad" : 04.-05. märts 2014, Tartu 2014 / [1] p

Study of spray-deposited CuInS₂ in ETA solar cells

Lenzmann, F.; Dlodczik, L.; Grasso, C.; Kijatkina, Olga; Mahrov, B.; Rühle, S. EMRS 2002, France. B/P111 2002 / p. 35

Study of structural and optoelectronic properties of Cu₂Zn(Sn_{1-x}Ge_x)Se₄ (x = 0 to 1) alloy compounds

Grossberg, Maarja; Timmo, Kristi; Raadik, Taavi; Kärber, Erki; Mikli, Valdek; Krustok, Jüri Thin solid films 2015 / p. 176-179 : ill <https://doi.org/10.1016/j.tsf.2014.10.055> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Study of Zn(O,S) films grown by aerosol assisted chemical vapour deposition and their application as buffer layers in Cu(In,Ga)(S,Se)₂ solar cells

Kriisa, Merike; Saez-Araoz, Rodrigo; Kärber, Erki; Krunks, Malle Solar energy 2015 / p. 562-568 : ill <https://doi.org/10.1016/j.solener.2015.02.046> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Study of the optical properties of Sb₂(Se_{1-x}S_x)₃ (x = 0-1) solid solutions

Uslu, Mehmet Ender; Kondrotas, Rokas; Nedzinskas, Ramunas; **Volobujeva, Olga; Timmo, Kristi; Kauk-Kuusik, Marit; Krustok, Jüri; Grossberg, Maarja** Materials science in semiconductor processing 2022 / art. 106571 <https://doi.org/10.1016/j.mssp.2022.106571> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Study of the properties of TiO₂ thin films deposited by ultrasonic spray pyrolysis [Online resource]

Chen, Z.; Oja Acik, Ilona; Dündar, Ibrahim; Mere, Arvo Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [4.-5. veebr. 2019, Tartu : teesid] 2019 / 1 p <http://fmtdk.ut.ee/teesid-2019/>

Study of the structure and optoelectronic properties of Cu₂Ge(SexS_{1-x})₃ microcrystalline powders

Li, Xiaofeng; Timmo, Kristi; Grossberg, Maarja; Pilvet, Maris; Kaupmees, Reelika; Krustok, Jüri; Muska, Katri; Mikli, Valdek; Kauk-Kuusik, Marit Thin solid films 2022 / art. 139053, 6 p. : ill <https://doi.org/10.1016/j.tsf.2021.139053> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Study on power losses of the full soft-switching current-fed DC/DC converter with Si and GaN devices

Chub, Andrii; Rabkowski, Jacek; Blinov, Andrei; Vinnikov, Dmitri IECON 2015 - Yokohama : 41st Annual Conference of the IEEE Industrial Electronics Society : November 9-12, 2015, Pacifico Yokohama, Yokohama, Japan 2015 / p. 13-18

Study on the properties of TiO₂ thin films deposited by ultrasonic spray pyrolysis

Chen, Zengjun; Oja Acik, Ilona; Dündar, Ibrahim; Mere, Arvo The 15th International Conference of Young Scientists on Energy Issues (CYSENI 2018) : 23-25 May 2018, Kaunas, Lithuania 2018 / p. X-416 - X-423 : ill http://cyseni.com/archives/proceedings/Proceedings_of_CYSENI_2018.pdf

SuInSe₂ pinna keemiline söövitamine

Kauk, Marit; Tsarjova, Tatjana; Altosaar, Mare; Raudoja, Jaan XXVIII Eesti keemiapäevad : teaduskonverentsi ettekannete teesid = 28th Estonian Chemistry Days : abstracts of scientific conference 2002 / lk. 52-53

Sulfur-containing Cu₂ZnSnSe₄ monograin powders for solar cells

Timmo, Kristi; Altosaar, Mare; Raudoja, Jaan; Muska, Katri; Pilvet, Maris; Kauk, Marit; Varema, Tiit; Danilson, Mati; Volobujeva, Olga; Mellikov, Enn Solar energy materials & solar cells 2010 / 11, p. 1889-1892 : ill

Surface plasmon resonance in ZnO nanorod arrays caused by gold nanoparticles for solar cell application

Gromōko, Inga; Oja Acik, Ilona; Krunks, Malle; Dedova, Tatjana; Katerski, Atanas; Mere, Arvo; Mikli, Valdek; Vessart, Risto Physica status solidi (c) 2015 / p. 1338-1343 : ill <https://doi.org/10.1002/pssc.201510103> [Journal metrics at Scopus](#) [Article at Scopus](#)

Suur lugu: Kuum ja pilvitu ilm vähendab märgatavalt päikesepaneelide tootlikkust. Mida paneele ostes tähele panna?

Soopan, Ivar rohe.geenius.ee 2023 [Suur lugu: Kuum ja pilvitu ilm vähendab märgatavalt päikesepaneelide tootlikkust. Mida paneele ostes tähele panna?](#)

Synthesis and characterisation of Cu₂ZnSnSe₄ thin films prepared via a vacuum evaporation-based route

Volobujeva, Olga; Bereznev, Sergei; Raudoja, Jaan; Otto, Kairi; Pilvet, Maris; Mellikov, Enn Thin solid films 2013 / p. 48-51 : ill <https://doi.org/10.1016/j.tsf.2012.12.080> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Synthesis and characterization of pyrite FeS₂ solar cell absorber crystals and modifying their surface

Kristmann, Katriin; Raadik, Taavi; Altosaar, Mare; Mikli, Valdek; Danilson, Mati Graduate School of Functional Materials and Technology (GSFMT) Scientific Conference : abstracts 2022 / 29 I. [Graduate School of Functional Materials and Technology \(GSFMT\) Scientific Conference 2022](#)

Synthesis and characterization of tetrahedrite absorber materials for photovoltaic application

Ghisani, Fairouz; Timmo, Kristi; Altosaar, Mare Graduate School of Functional Materials and Technology (GSFMT) Scientific Conference : abstracts 2022 / 17 I. [Graduate School of Functional Materials and Technology \(GSFMT\) Scientific Conference 2022](#)

Synthesis and characterization of tetrahedrite Cu₁₀Cd₂Sb₄S₁₃ monograin material for photovoltaic application

Ghisani, Fairouz; Timmo, Kristi; Altosaar, Mare; Raudoja, Jaan; Mikli, Valdek; Pilvet, Maris; Kauk-Kuusik, Marit; Grossberg, Maarja Materials science in semiconductor processing 2020 / art. 104973 <https://doi.org/10.1016/j.mssp.2020.104973> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Synthesis and characterization of tetrahedrite Cu₁₀Cd₂Sb₄S₁₃ monograin material for photovoltaic application [Online resource]

Ghisani, Fairouz; Timmo, Kristi; Altosaar, Mare; Raudoja, Jaan Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [4.-5. veebr. 2019, Tartu : teesid] 2019 / 1 p <http://fmdk.ut.ee/teesid-2019/>

Synthesis and optical properties of Ga₂O₃ nanowires grown on GaS substrate

Leontie, Liviu; Sprincean, Veaceslav; Untila, Dumitru; Spalatu, Nicolae Thin solid films 2019 / art. 137502, 6 p. : ill <https://doi.org/10.1016/j.tsf.2019.137502> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Synthesis of Cu₂ZnSnS₄ solar cell absorber material by sol-gel method

Kumar, Suresh; Kasubosula, Bharath; Loorits, Mihkel; Raudoja, Jaan; Mikli, Valdek; Altosaar, Mare; Grossberg, Maarja Energy procedia 2016 / p. 102-109 : ill <https://doi.org/10.1016/j.egypro.2016.11.324> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

System-level condition monitoring approach for fault detection in photovoltaic systems

Zahraoui, Younes; Alhamrouni, Ibrahim; Hayes, Barry P.; Mekhilef, Saad; Korötko, Tarmo Fault analysis and its impact on grid-connected photovoltaic systems performance 2022 <https://doi.org/10.1002/9781119873785.ch7>

Zinc oxide rods on different TCO substrates and seed layers by electrochemical deposition

Gromōko, Inga; Dedova, Tatjana; Krunks, Malle; Mikli, Valdek; Unt, Tarmo; Oja Acik, Ilona; Mere, Arvo Proceedings of the 11th International Conference of Young Scientists on Energy Issues : CYSENI 2014 : May 29-30, 2014, Kaunas, Lithuania 2014 / p. VII-298-VII-305

Zinc oxide thin films by spray pyrolysis method for solar cells

Krunks, Malle; Varema, Tiit; Meissner, Dieter Tallinna Tehnikaülikooli Toimetised 1994 / lk. 101-113: ill

Zinc oxide thin films by the spray pyrolysis method

Krunks, Malle; Mellikov, Enn Thin solid films 1995 / p. 33-36: ill

ZnO nanostructures by chemical spray for next generation solar cells

Krunks, Malle; Dedova, Tatjana; Oja Acik, Ilona; Kriisa, Merike; Mikli, Valdek; Katerski, Atanas; Kärber, Erki; Mere, Arvo NEXTGEN NANO PV : book of abstracts 2013 / p. 31-32

ZnO nanowires for solar cells : a comprehensive review

Consonni, Vincent; Briscoe, Joe; Kärber, Erki Nanotechnology 2019 / art. 362001, 41 p : ill <https://doi.org/10.1088/1361-6528/ab1f2e> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Zn(O,Se) as a novel buffer layer for thin film solar cells

Abdalla, Akram; Polivtseva, Svetlana; Spalatu, Nicolae; Volobujeva, Olga; Hiie, Jaan; Bereznev, Sergei Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [4.-5. veebr. 2019, Tartu : teesid] 2019 <http://fmdk.ut.ee/teesid-2019/>

ZnS buffer layer for Cu₂ZnSn(SSe)₄ monograin layer solar cell

Nguyen, Mai; Ernits, Kaia; **Meissner, Dieter** Solar energy 2015 / p. 344-349 : ill <http://dx.doi.org/10.1016/j.solener.2014.11.006>

Tailoring composition and properties of CuInSe₂ materials for solar cell application

Kauk, Marit; Timmo, Kristi; **Kaupmees, Liina**; **Altosaar, Mare**; **Raudoja, Jaan** The Fourth International Conference on Advanced Optical Materials and Devices : (AOMD-4) : Tartu, Estonia, July 6-9, 2004 : abstracts 2004 / p. 44

Tailoring the composition and properties of CuInSe₂ materials for solar cell application

Kauk, Marit; **Altosaar, Mare**; **Raudoja, Jaan**; **Timmo, Kristi**; **Grossberg, Maarja**; **Varema, Tiit**; **Ernits, Kaia** Proceedings of SPIE 2005 / Optical materials and applications, p. 224

Tallinna Tehnikaülikool tunnustab : iseliikuv robotsõiduk Boxbot ja päikeseelektrit tootev teekatend

Elektriala 2021 / lk. 8 : fot https://www.ester.ee/record=b1240496*est

Tallinnas alustatakse energiakriisi lahendamist: päikesepaneelid põldudel ja ehitistel saavad kergemaks ning tõhusamaks

postimees.ee 2023 [Tallinnas alustatakse energiakriisi lahendamist: päikesepaneelid põldudel ja ehitistel saavad kergemaks ning tõhusamaks](#)

TalTech panustab kosmosevaldkonda kiipide, päikesepaneelide ja satelliitidega

Normak, Liisu Kirke Trialoog 2025 <https://trialoog.taltech.ee/taltech-panustab-kosmosevaldkonda-kiipide-paikesepaneelide-ja-satelliitidega/>

TalTech teel Kuule Päikest võtma

Vaaks, Eveliis; Raadik, Taavi Trialoog 2025 <https://trialoog.taltech.ee/tehnikaulikool-teel-kuule-paikest-votma/>

TalTech toob päikeselise tuleviku

Ehitaja 2023 / lk. 34-35 : fot https://www.ester.ee/record=b1072123*est https://artiklid.elnet.ee/record=b2904074*est

TalTech toob päikeselise tuleviku

digi.geenius.ee 2023 [TalTech toob päikeselise tuleviku](#)

TalTech toob päikeselise tuleviku

digi.geenius.ee 2023 [TalTech toob päikeselise tuleviku](#)

TalTechi doktorant tahab uue põlvkonna päikesepaneelid Kuule viia

Kristmann, Katriin menu.err.ee 2024 [TalTechi doktorant tahab uue põlvkonna päikesepaneelid Kuule viia](#)

TalTechi teadlased otsivad parimat päikesepaneelimaterjali

Imeline Teadus 2021 / lk. 22-23 : fot https://www.ester.ee/record=b2747925*est

TalTechi teadlased: viie aastaga laieneb päikeseenergeetika lahenduste valik märgatavalt

Oja Acik, Ilona digi.geenius.ee 2023 [TalTechi teadlased: viie aastaga laieneb päikeseenergeetika lahenduste valik märgatavalt](#)

TalTechi teadlaste seade tõustab päikesepaneele

Imeline Teadus 2019 / lk. 21 : fot https://www.ester.ee/record=b2747925*est

TalTechi teadur tahab viia elektrikulud nulli lähedale

arileht.delfi.ee 2023 [TalTechi teadur tahab viia elektrikulud nulli lähedale](#)

Teadlane dilemma ees - kas teha teadust või siseneda ärimaailma

Grossberg-Kuusk, Maarja TööstusEST 2024 / lk. 10-13 : portr., skeem https://www.ester.ee/record=b4481084*est

Teadlane: elekter läheb odavamaks, võrgutasud kallimaks

Rosin, Argo novaator.err.ee 2024 [Teadlane: elekter läheb odavamaks, võrgutasud kallimaks](#)

Teadlased nuputavad, kuidas ehitada kliimaneutraalset ja taskukohast maja

Leis, Tiiu Postimees 2021 / Lk. 6-7 <https://dea.digar.ee/publication/postimees> https://www.ester.ee/record=b1072778*est

Teadlased nuputavad, kuidas ehitada kliimaneutraalset ja taskukohast maja [Võrguväljaanne]

Leis, Tiiu postimees.ee 2021 ["Teadlased nuputavad, kuidas ehitada kliimaneutraalset ja taskukohast maja"](#)

Teadus ja igapäevaelu : teadussaavutuste rakendamine praktikas

Alvela, Ain Tehnikamaailm 2024 / lk. 68-73 : ill., fot., portr https://www.ester.ee/record=b1073050*est

Teadus nõuab detektiivimõtteviisi

Eesti Naine 2023 / lk. 62-63 : fot https://www.ester.ee/record=b1072072*est

Tee toodabki elektrit

Teeleht 2017 / lk. 6 : fot http://www.ester.ee/record=b1073043*est

Temperature dependent current transport properties in $\text{Cu}_2\text{ZnSnS}_4$ solar cells

Danilson, Mati; Kask, Erkki; Pokharel, Nikhil; Grossberg, Maarja; Kauk-Kuusik, Marit; Varema, Tiit; Krustok, Jüri Thin solid films 2015 / p. 162-165 : ill <https://doi.org/10.1016/j.tsf.2014.10.069> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Temperature dependent electroreflectance study of CdTe solar cells

Raadik, Taavi; Krustok, Jüri; Josepson, Raavo; Hiie, Jaan; Potlog, Tamara; Spalatu, Nicolae Thin solid films 2013 / p. 279-282 : ill <https://doi.org/10.1016/j.tsf.2012.12.083> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Temperature dependent electroreflectance study of $\text{Cu}_2\text{ZnSnSe}_4$ solar cells

Krustok, Jüri; Raadik, Taavi; Grossberg, Maarja; Giraldo, Sergio; Neuschitzer, Markus; Lopez-Marino, Simon; Saucedo, Edgardo Materials science in semiconductor processing 2015 / p. 251-254 : ill <https://doi.org/10.1016/j.mssp.2015.04.055> [Journal metrics at Scopus](#) [Article at Scopus](#) [Article at WOS](#) [Article at WOS](#)

Temperature-dependent photorefectance of SnS crystals

Raadik, Taavi; Grossberg, Maarja; Raudoja, Jaan; Traksmaa, Rainer; Krustok, Jüri Journal of physics and chemistry of solids 2013 / p. 1683-1685 : ill <https://doi.org/10.1016/j.jpcs.2013.06.002> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Textile-integrated conductive layers for flexible semiconductor-based photovoltaic structures

Czarnecki, Przemyslaw; Szudziel, Bartosz; Janczak, Daniel; Ruta, Lukasz; **Sibinski, Maciej**; Znajdek, Katarzyna Energies 2024 / art. 3839 <https://doi.org/10.3390/en17153839>

The cost-effective deposition of ultra-thin titanium(IV) oxide passivating layers for improving photoelectrochemical activity of SnS electrodes

Kois, Julia; Polivtseva, Svetlana; Bereznev, Sergei Thin solid films 2019 / p. 152-156 : ill <https://doi.org/10.1016/j.tsf.2018.12.047> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The effect of Ag alloying of $\text{Cu}_2(\text{Zn,Cd})\text{SnS}_4$ on the monograin powder properties and solar cell performance

Timmo, Kristi; Altosaar, Mare; Pilvet, Maris; Mikli, Valdek; Grossberg, Maarja; Danilson, Mati; Raadik, Taavi; Josepson, Raavo; Krustok, Jüri; Kauk-Kuusik, Marit Journal of materials chemistry A 2019 / p. 24281-24291 : ill <https://doi.org/10.1039/C9TA07768E> TTÜ teadlased tõstsid uue põlvkonna päikesepaneelide tõhusust [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The effect of laser fluences on the structural and optoelectronic properties of Zn(O,Se) films

Abdalla, Akram; Kärber, Erki; Mikli, Valdek; Bereznev, Sergei Materials science in semiconductor processing 2021 / art. 105429, 5 p. : ill <https://doi.org/10.1016/j.mssp.2020.105429> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The effect of S/Se ratio on the properties of $\text{Cu}_2\text{CdGe}(\text{SxSe1-x})_4$ monograin powders for photovoltaic applications

Li, Xiaofeng; Kauk-Kuusik, Marit; Timmo, Kristi; Pilvet, Maris; Grossberg, Maarja; Raadik, Taavi; Danilson, Mati; Mikli, Valdek GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 52 <http://fmdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

The electrical and optical properties of kesterites

Grossberg, Maarja; Krustok, Jüri; Hages, Charles J.; Bishop, Douglas M. Journal of Physics Energy 2019 / art. 044002, 16 p. : ill <https://doi.org/10.1088/2515-7655/ab29a0>

The processes and enthalpies in synthesis of $\text{Cu}_2\text{ZnSnS}_4$ in molten CdI_2

Nkwusi, Godswill; Leinemann, Inga; Altosaar, Mare International advanced research journal in science, engineering and technology 2016 / p. 113-119 : ill <http://dx.doi.org/10.17148/IARJSET.2016.3524>

The role of spatial potential fluctuations in the shape of the PL bands of multinary semiconductor compounds

Krustok, Jüri; Collan, Heikki; Yakushev, M.; Hjelt, Kari Physica scripta 1999 / Proceedings of 18th Nordic Semiconductor Meeting, Linköping, Sweden, June 7-10, 1998, ISBN 91-87308-71-1, p. 179-182: ill <https://deepzone4.ttu.ee/~juri.krustok/PDF-s/PHYSSCR.PDF>

Thermal decomposition study of $\text{HAuCl}_4 \cdot 3\text{H}_2\text{O}$ and AgNO_3 as precursors for plasmonic metal nanoparticles

Otto, Kairi; Krunks, Malle; Oja Acik, Ilona; Tõnsuaadu, Kaia Book of abstracts : 2nd Central and Eastern European Conference on Thermal Analysis and Calorimetry, 27-30 August 2013, Vilnius, Lithuania 2013 / p. 298

Thin tin monosulfide films deposited with the HVE method for photovoltaic applications = Tanka plast hve kositrovega monosulfida za uporabo v fotovoltaiiki

Naidu, Revathi; Bereznev, Sergei; Lehner, Julia; Traksmaa, Rainer; Safonova, Maria; Mellikov, Enn; Volobujeva, Olga Materials and technology 2015 / p. 149-152 : ill <http://mit.imt.si/Revija/izvodi/mit151/revathi.pdf>

Three-mode reconfigurable rectifier for DC-DC converters with wide input voltage range

Chub, Andrii; Vinnikov, Dmitri; Kouro, Samir; Malinowski, Mariusz IECON 2019 - 45th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2019 / p. 4429-4435 <https://doi.org/10.1109/IECON.2019.8926994> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Tin dioxide thin films deposited by sol - gel technique

Ganchev, Maxim; **Katerski, Atanas;** Stankova, Stanka; Eensalu, Jako Siim; Terziyska, Penka AIP conference proceedings 2019 / art. 140001, 8 p <https://doi.org/10.1063/1.5091316> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Towards all inorganic antimony sulphide semitransparent solar cells

Pareek, Alka; Katerski, Atanas; Kriisa, Merike; Spalatu, Nicolae; Krunks, Malle; Oja Acik, Ilona Scientific reports 2024 / art. 1468 <https://doi.org/10.1038/s41598-025-85676-x>

Tunneling-enhanced interface recombination and current loss curves in kesterite solar cells

Krustok, Jüri; Timmo, Kristi; Kauk-Kuusik, Marit; Grossberg-Kuusik, Maarja Applied physics letters 2023 / art. 242102 <https://doi.org/10.1063/5.0175082> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Two-dimensional CuIn1-xGaxSe2 nano-flakes by pulse electrodeposition for photovoltaic applications

Mandati, Sreekanth; Dey, Suhash R.; Joshi, Shrikant V.; Sarada, Bulusu V. Solar energy 2019 / p. 396-404 <https://doi.org/10.1016/j.solener.2019.02.022>

Ultra thin TiO2 films with gold nanoparticles by the chemical spray pyrolysis method

Oja Acik, Ilona; Oyekoya, G.; Dedova, Tatjana; Mikli, Valdek; Mere, Arvo; Krunks, Malle; Dolgov, Leonid; Sildos, Ilmo Joint 12th Russia/CIS/Baltic/Japan Symposium on Ferroelectricity and 9th International Conference Functional Materials and Nanotechnologies : Institute of Solid State Physics, University of Latvia, September 29-October 2, Riga, Latvia : book of abstracts 2014 / p. 296

Ultrasonically sprayed In2S3 films for Cu(In,Ga)Se2 solar cells

Ernits, Kaia; Kaelin, M.; Bremaud, D. Proceedings of 21st European Photovoltaic Solar Energy Conference and Exhibition : Dresden, Germany, 4-8 September 2006 / p. 1853-1856

Ultrawide voltage gain range microconverter for integration of silicon and thin-film photovoltaic modules in DC microgrids

Chub, Andrii; Vinnikov, Dmitri; Korkh, Oleksandr; Malinowski, Mariusz; Kouro, Samir IEEE transactions on power electronics 2021 / p. 13763-13778 <https://doi.org/10.1109/TPEL.2021.3084918> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Uniform Sb2S3 optical coatings by chemical spray method

Eensalu, Jako Siim; Katerski, Atanas; Kärber, Erki; Oja Acik, Ilona; Mere, Arvo; Krunks, Malle Beilstein journal of nanotechnology 2019 / p. 198-210 : ill <https://doi.org/10.3762/bjnano.10.18> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Uniform Sb2S3 optical coatings by chemical spray method : [conference paper]

Eensalu, Jako Siim; Katerski, Atanas; Kärber, Erki; Oja Acik, Ilona; Mere, Arvo; Krunks, Malle Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [4.-5. veebr. 2019, Tartu : teesid] 2019 / 1 p <http://fntdk.ut.ee/teesid-2019/>

Uudne tehnoloogia päikeseenergiahoonetele

Chub, Andrii Ehitaja 2022 / lk. 22-23 : fot https://www.ester.ee/record=b1072123*est <https://taltech.ee/uudised/jouelektroonika-teadustoo-viljad-edendavad-paikeseenergia-tehnoloogiat>

Uudse päikesepaneeli leiutajad soovivad rajada miljarditehase : [teemat tutvustab Andres Öpik]

Öpik, Andres; Pinn, Mariliis Äripäev 2007 / 3. mai, lk. 11 <https://www.aripaev.ee/uudised/2007/05/02/uudse-paikesepaneeli-leiutajad-soovivad-rajada-miljarditehase>

Uue ajastu talupidaja tõestab päikeseenergia tasuvust

Alas, Taavi; **Loorits, Mihkel** Maaleht 2016 / Maa Elu, lk. 6-7 <https://maaelu.postimees.ee/3734369/uue-ajastu-talupidaja-toestab-paikeseenergia-tasuvust>

Uue põlvkonna päikesepaneelid muudavad kodu päikeseptareiks

Sibinski, Maciej novaator.err.ee 2024 [Uue põlvkonna päikesepaneelid muudavad kodu päikeseptareiks](#)

Uus materjal suurendab päikesepaneelide tõhusust

Imeline Teadus 2020 / lk. 20 : fot https://www.ester.ee/record=b2747925*est

Uute juhtidega jätkab Solarstone päikeseauto ehitamise toetamist

Koorep, Sigrid sakala.postimees.ee 2024 [Uute juhtidega jätkab Solarstone päikeseauto ehitamise toetamist](#)

Vastloodud TalTechi õppekava võimaldab paremasse tulevikku panustada [Võrguväljaanne]

forte.delfi.ee 2022 ["Vastloodud TalTechi õppekava võimaldab paremasse tulevikku panustada"](#)

Voltage control tuning of a single-phase grid-Connected 3L qZS-based inverter for PV application

Pires Pimentel, Sergio; Husev, Oleksandr; Vinnikov, Dmitri; Roncero-Clemente, Carlos; **Makovenko, Elena** 2018 IEEE 38th International Conference on Electronics and Nanotechnology (ELNANO 2018) : Kyiv, Ukraine, 24-26 April 2018 / p. 692–698 : ill <https://doi.org/10.1109/ELNANO.2018.8477438>

Üliõhuke päikesepaneel avab energia tootmisele uued ukсед

Alvela, Ain; **Krautmann, Robert** novaator.err.ee 2023 [Üliõhuke päikesepaneel avab energia tootmisele uued ukсед](#)
<https://digikogu.taltech.ee/et/Item/e7e64926-5d49-40ad-8b3a-e225ea034f7d> Ученый из Эстонии разрабатывает солнечные панели, которые изменят мир

В познавательном центре „Энергия“ открылась новая постоянная экспозиция, в фокусе которой солнечная энергия

rus.delfi.ee 2025 <https://rus.delfi.ee/statja/120366289/foto-v-poznavatelnom-centre-energiya-otkrylas-novaya-postoyannaya-ekspoziciya-v-fokuse-kotoroy-solnechnaya-energiya>

Выгодно ли устанавливать солнечные батареи дома?

Raadik, Taavi delfi.ee 2024 [Выгодно ли устанавливать солнечные батареи дома?](#)

Как правильно выбрать солнечные панели для своего дома? Рассказывает эксперт [Online resource]

delfi.ee 2022 [Как правильно выбрать солнечные панели для своего дома? Рассказывает эксперт](#)

Сравнительный анализ повышающих преобразователей для интеграции фотоэлектрических панелей в сеть

Husev, Oleksandr; **Vinnikov, Dmitri;** Veligorsky, O. Энергосбережение, энергетика, энергоаудит = Energy saving, power engineering, energy audit 2013 / с. 28-34 : ил

Сравнительный анализ повышающих преобразователей для интеграции фотоэлектрических панелей в сеть [Компьют. файл]

Husev, Oleksandr; **Vinnikov, Dmitri;** Veligorsky, O. Международная Научно-Техническая Конференция "Силовая Электроника и Энергоэффективность" : 23-27.IX 2013, Алушта, Крым 2013 / [2] с. : ил [CD-ROM]

Умная эстонка разрабатывает солнечные батареи, которые можно интегрировать в одежду

limon.ee 2023 [Умная эстонка разрабатывает солнечные батареи, которые можно интегрировать в одежду](#)

Ученые: солнечные панели можно делать и из дешевых материалов

Kauk-Kuusik, Marit dv.ee 2025 [Ученые: солнечные панели можно делать и из дешевых материалов](#)

Эксперт : как правильно выбрать солнечные панели для своего дома [Online resources]

rus.postimees.ee 2022 [Эксперт : как правильно выбрать солнечные панели для своего дома](#)

Электроосаждение полипиррола в качестве тыльного контакта для солнечного элемента CdS/CdTe

Bereznev, Sergei; Kois, Julia; Jarkov, Aleksandr; Öpik, Andres; Mellikov, Enn Шестая Всероссийская Каргинская конференция "Полимеры - 2014". Том I, Программа конференции и сборник тезисов пленарных, приглашённых, и устных докладов 2014 / с. 165