

### 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](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. novaator.err.ee 2024 [Akadeemik: tööstuses võiks olla rohkem doktorikraadiga juhte](#)

### Amorphous Zn(O,Se) buffer layer for Cu(In,Ga)Se<sub>2</sub> 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 Sb<sub>2</sub>Se<sub>3</sub> 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](https://fntdk.ut.ee/wp-content/uploads/2021/06/GSFMT_abstractbook_2021.pdf)

### Analysis of grain orientation and defects in Sb<sub>2</sub>Se<sub>3</sub> 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 rakendamine päikeseenergeetika materjalide uurimiseks

Raadik, Taavi 2015 <https://digi.lib.ttu.ee/i/?2521> [https://www.ester.ee/record=b4482452\\*est](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; Malinauskienė, 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](#)

### 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 Cu<sub>10</sub>Cd<sub>2</sub>Sb<sub>4</sub>S<sub>13</sub> 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 TiO<sub>2</sub>/Sb<sub>2</sub>Se<sub>3</sub> 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 <http://dx.doi.org/10.1063/1.4959995>

### **Characterisation of ultrasonically sprayed InxSy buffer-layers for Cu(In,Ga)Se2 solar cells**

**Ernits, Kaia**; Bremaud, D.; **Mellikov, Enn** Thin solid films 2007 / 15, p. 6051-6054

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### **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

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**Kristmann, Katriin; 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](#)

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**Krunks, 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**

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Gavrilov, S.; **Oja Acik, Ilona**; Lim, B. Physica status solidi (a) 2006 / 5, p. 1024-1029 : ill

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### **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

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**Katerski, Atanas** 2011 <https://digi.lib.ttu.ee/i/?524>

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**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 [https://fntdk.ut.ee/wp-content/uploads/2021/06/GSFMT\\_abstractbook\\_2021.pdf](https://fntdk.ut.ee/wp-content/uploads/2021/06/GSFMT_abstractbook_2021.pdf)

### **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 <http://dx.doi.org/10.1002/pssc.201510082>

### **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>

**Compositionally tunable structure and optical properties of  $\text{Cu}_{1.85}(\text{Cd}_x\text{Zn}_{1-x})_{1.1}\text{SnS}_4$  ( $0 \leq x \leq 1$ ) 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 <http://dx.doi.org/10.1016/j.tsf.2014.10.091>

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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 over  $\text{MoSe}_2$  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>

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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  $\text{Sb}_2\text{S}_3$  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  $\text{CuInS}_2$  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 ( $\text{Cu}_2\text{ZnSnSe}_4$ ) crystal growth for use in monograin membrane solar cells**

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**CZTS (Kesterite) monograin membranes for photoelectrochemical water splitting (preparation and characterization)**

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**$\text{Cu}_2\text{ZnSnS}_4$  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-Kuusik, Maarja Journal of materials chemistry A 2023 / p. 23640-23652 <https://doi.org/10.1039/D3TA04541B>  
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**$\text{Cu}_2\text{ZnSnSe}_4$  monograin powders for solar cell application [Electronic resource]**

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**$\text{Cu}(\text{In,Ga})\text{Se}_2$  monograin powders with different Ga content for solar cells**

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**$\text{CuInS}_2$  solar cell absorber plasmonically modified by gold nanoparticles**

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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

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

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### **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;** Brammert, Guy; Vermang, Bart; **Danilson, Mati; Grossberg, Maarja** ACS Applied Energy Materials 2021 / p. 12374–12382

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### **Detailed photoluminescence study of Cu<sub>2</sub>Ge(SSe)<sub>3</sub> microcrystals**

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**Jalakas, Tanel; Chub, Andrii; Vinnikov, Dmitri; Spalatu, Nicolae; Gudkova, Viktoria; Krunks, Malle; Mere, Arvo;** Lahi, Allan

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### **Development of antimony sulfide thin-film solar cells for semitransparent applications**

**Beglaryan, Robert; Katerski, Atanas; Oja Acik, Ilona; Krunks, Malle** Graduate School of Functional Materials and Technology

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### **Development of band gap tuned CU<sub>2</sub>ZN(SN<sub>1</sub>-XGEX)<sub>4</sub> monograin powders**

**Mengu, Idil; Grossberg-Kuusik, Maarja; Muska, Katri; Pilvet, Maris; Mikli, Valdek; Kaupmees, Reelika; Krustok, Jüri; Kauk-**

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### **Development of Bi<sub>2</sub>S<sub>3</sub> 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 Bi<sub>2</sub>S<sub>3</sub> 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 l. [Graduate School of Functional Materials and Technology \(GSFMT\) Scientific Conference 2022](#)

### **Development of Sb<sub>2</sub>Se<sub>3</sub> and Sb<sub>2</sub>S<sub>3</sub> thin film solar cells by close-spaced sublimation = Sb<sub>2</sub>Se<sub>3</sub> ja Sb<sub>2</sub>S<sub>3</sub> 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](https://www.ester.ee/record=b5573313*est)

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

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### **Device characteristics of CuInSe<sub>2</sub> based solar cells**

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

### **Dopant-free fluorene based dimers linked with thiophene units as prospective hole transport materials for Sb<sub>2</sub>S<sub>3</sub> solar cells**

**Juneja, Nimish;** Jegorove, Aiste; Gržibovskis, 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>

### **Economic pulse electrodeposition for flexible CuInSe<sub>2</sub> solar cells**

**Mandati, Srekanth;** 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 teadlaste nutikad minuundurid hoogustavad energiapöõret**

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### **Effect of absorber surface modification on the optoelectronic properties of Cu<sub>2</sub>CdGeSe<sub>4</sub> solar cells**

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### **Effect of CdCl<sub>2</sub> annealing treatment on structural and optoelectronic properties of close spaced sublimation CdTe/CdS thin film solar cells vs deposition conditions**

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## 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](#)

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