

Adhesion of single-walled carbon nanotube thin films with different materials

Rajanna, Pramod M.; Luchkin, Sergey; Larionov, Konstantin; Grebenko, Artem; Popov, Zakhar; Sorokin, Pavel; **Danilson, Mati; Bereznev, Sergei**; Lund, Peter D.; Nasibulin, Albert The journal of physical chemistry letters 2020 / p. 504–509
<https://doi.org/10.1021/acs.jpclett.9b03552> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Aerosol-assisted fine-tuning of optoelectrical properties of SWCNT films

Tsopenko, Alexey; Romanov, Stepan; Satco, Daria; **Volobujeva, Olga; Danilson, Mati** The journal of physical chemistry letters 2019 / p. 3961-3965 : ill <https://doi.org/10.1021/acs.jpclett.9b01498> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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](#)

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 the edge emission of highly conductive CuGaTe₂

Krustok, Jüri; Grossberg, Maarja; Jagomägi, Andri; **Danilson, Mati; Raudoja, Jaan** Thin solid films 2007 / 15, p. 6192-6195
<https://www.sciencedirect.com/science/article/abs/pii/S0040609006016117>

Anion effect of zinc source to chemically deposited ZnS(O,OH) films

Ernits, Kaia; Muska, Katri; **Danilson, Mati; Raudoja, Jaan; Varema, Tiit; Volobujeva, Olga; Altosaar, Mare** Advances in material science and engineering 2009 / [5] p. : ill

Characterisation of samarium and nitrogen co-doped TiO₂ films prepared by chemical spray pyrolysis

Oja Acik, Ilona; Kiisk, Valter; Krunks, Malle; Sildos, Ilmo; Junolainen, Agne; **Danilson, Mati; Mere, Arvo; Mikli, Valdek** Applied surface science 2012 / p. 735-741 : ill

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, 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](#)

Characterization of samarium and nitrogen doped TiO₂ films prepared by spray pyrolysis

Oja Acik, Ilona; Junolainen, Agne; Kiisk, Valter; Sildos, Ilmo; **Danilson, Mati; Krunks, Malle** EMRS-2010 Spring Meeting : Strasbourg, France, June 7-11 : program and book of abstracts. Symposion K 2010 / p. 4

Chemical bath deposition of ZnS films using different Zn-salts

Ernits, Kaia; Muska, Katri; Kauk, Marit; **Danilson, Mati; Raudoja, Jaan; Varema, Tiit; Volobujeva, Olga; Altosaar, Mare** Physics procedia : EMRS-2009 Spring Meeting, Strasbourg, France, 8-12 of June 2009 2009 / p. BP4-10

Chemical etching of Cu₂ZnSn(S,Se)₄ monograin powder

Timmo, Kristi; **Altosaar, Mare; Raudoja, Jaan; Grossberg, Maarja; Danilson, Mati; Volobujeva, Olga; Mellikov, Enn** 35th IEEE Photovoltaic Specialists Conference : Honolulu, HI, June 20-25, 2010 : conference proceedings 2010 / p. 1982-1985 : ill

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](#)

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

CO₂ transformed into highly active catalysts for the oxygen reduction reaction via low-temperature molten salt electrolysis

Rommel, Anna-Liis; Ratso, Sander; Liivand, Kerli; **Danilson, Mati**; Kaare, Kätlin; **Mikli, Valdek**; Kruusenberg, Ivar Electrochemistry Communications 2024 / art. 107781 <https://doi.org/10.1016/j.elecom.2024.107781> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Comparative study of perhydropolysilazane protective films

Shmagina, Elizaveta; Danilson, Mati; Mikli, Valdek; Bereznev, Sergei Surface engineering 2022 / p. 769-777 : ill
<https://doi.org/10.1080/02670844.2022.2155445> Journal metrics at Scopus Article at Scopus Journal metrics at WOS 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 benzimidazolediol-derived iron triad M–N–C nanomaterials as trifunctional catalysts in alkaline and acidic media : [manuscript]

Alam, Mahboob; Ping, Kefeng; Danilson, Mati; Mikli, Valdek; Käärik, Maike; Leis, Jaan; Aruväli, Jaan; Paiste, Päärn; Rähn, Mihkel; Sammelselg, Väino; Tammeveski, Kaido; Kramm, Ulrike; Kongi, Nadežda; Starkov, Pavel 2022

Compositionally tunable structure and optical properties of $\text{Cu}_{1.85}(\text{Cd}_x\text{Zn}_{1-x})_{1.1}\text{SnS}_{4.1}$ ($0 \leq x \leq 1$) 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 <https://doi.org/10.1016/j.tsf.2014.10.091> Conference Proceedings at Scopus Article at Scopus Conference Proceedings at WOS Article at WOS

Cost-effective screen printing approach for Ce/Nd-doped ZnAl_2O_4 films: tuning crystallinity induced by the substrate

Rojas Hernandez, Rocio Estefania; Rubio-Marcos, Fernando; Necib, Jallouli; Danilson, Mati; Fernandez, Jose Francisco; Hussainova, Irina Physical chemistry chemical physics 2023 / p. 15829-15838 <https://doi.org/10.1039/D3CP02005C> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

CZTS monograin powders and thin films

Mellikov, Enn; Meissner, Dieter; Altosaar, Mare; Kauk, Marit; Krustok, Jüri; Öpik, Andres; Volobujeva, Olga; Iljina, Julia; Timmo, Kristi; Klavina, J.; Raudoja, Jaan; Grossberg, Maarja; Varema, Tiit; Muska, Katri; Ganchev, Maxim; Bereznev, Sergei; Danilson, Mati Advanced materials research 2011 / p. 8-13

$\text{Cu}_2\text{Zn}_{1-x}\text{CdSn}(\text{Se}_{1-y}\text{S}_y)_4$ solid solutions as absorber materials for solar cells

Altosaar, Mare; Raudoja, Jaan; Timmo, Kristi; Danilson, Mati; Grossberg, Maarja; Krustok, Jüri; Mellikov, Enn Physica status solidi (a) : applications and materials science 2008 / 1, p. 167-170 : ill <https://colab.ws/articles/10.1002%2Fpssa.200776839>

$\text{Cu}_2\text{ZnSnS}_4$ 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> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

$\text{Cu}_2\text{ZnSnSe}_4$ films from binary precursors

Volobujeva, Olga; Mellikov, Enn; Timmo, Kristi; Danilson, Mati; Bereznev, Sergei Journal of Renewable and Sustainable Energy 2013 / art. 031618 <https://doi.org/10.1063/1.4811242> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

$\text{Cu}_2\text{ZnSnSe}_4$ monograin powders for solar cell application [Electronic resource]

Altosaar, Mare; Raudoja, Jaan; Timmo, Kristi; Danilson, Mati; Grossberg, Maarja; Krunk, Malle; Varema, Tiit; Mellikov, Enn 2006 IEEE 4th World Conference on Photovoltaic Energy Conversion - WCPEC 2006 / [CD-ROM]

$\text{Cu}_2(\text{Zn}_x\text{Sn}_{2-x})(\text{SySe}_{1-y})_4$ monograin materials for photovoltaics

Mellikov, Enn; Altosaar, Mare; Raudoja, Jaan; Timmo, Kristi; Volobujeva, Olga; Kauk, Marit; Krustok, Jüri; Varema, Tiit; Grossberg, Maarja; Danilson, Mati; Muska, Katri; Ernits, Kaia; Lehner, Franz; Meissner, Dieter Materials Challenges in Alternative and Renewable Energy: a collection of papers presented at the Materials Challenges in Alternative and Renewable Energy Conference February 21-24, 2010, Cocoa Beach, Florida 2011 / p. 137-142 : ill

$\text{Cu}(\text{In,Ga})\text{Se}_2$ 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

CuInS_2 kilede koostise uurimine XPS meetodil

Katerski, Atanas; Danilson, Mati; Mere, Arvo; Krunk, Malle XXXI Eesti keemiapäevad : [28. aprill 2010, Tallinn] : teaduskonverentsi teesid = 31st Estonian Chemistry Days : abstracts of scientific conference 2010 / lk. 41

Deep and edge photoluminescence emission of CuInTe_2

Jagomägi, Andri; Krustok, Jüri; Raudoja, Jaan; Grossberg, Maarja; Danilson, Mati Physica status solidi (b) 2003 / 2, p. R3-R5

Deep defect related photoluminescence in heavily doped GaGaTe_2

Jagomägi, Andri; Krustok, Jüri; Grossberg, Maarja; Danilson, Mati; Raudoja, Jaan Physica status solidi (a) 2006 / 5, p. 949-955 : ill <http://deepzone3.ttu.ee/~juri.krustok/PDF-s/Deep%20defect%20related%20photoluminescence%20in%20heavily%20doped.pdf>

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](#)

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

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 the growth temperature on chemical composition of spray-deposited CuInS₂ thin films

Katerski, Atanas; Danilson, Mati; Mere, Arvo; Krunks, Malle Energy procedia 2010 / p. 103-107 : ill

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](#)

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

[conference paper]

Spiridonova, Jekaterina; Katerski, Atanas; Danilson, Mati; Kritševskaja, Marina; Krunks, Malle; Oja Acik, Ilona GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 78 <http://fntdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

The effect of tin doping on the band structure and optical properties of polycrystalline antimony selenide

Uslu, Mehmet Ender; Danilson, Mati; Timmo, Kristi; Grossberg-Kuusk, Maarja Physica B : condensed matter 2024 / art. 415744 <https://doi.org/10.1016/j.physb.2024.415744> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effects of cationic substitution on the properties of Sb_{1-x}BixS₂ (x = 0–1) compounds

Dolcet Sadurni, Marc; Timmo, Kristi; Mikli, Valdek; Krustok, Jüri; Danilson, Mati; Suchodolskis, Arturas; Radu, Cristian; Bocirnea, Amelia Elena; **Grossberg-Kuusk, Maarja; Kauk-Kuusik, Marit** Journal of Alloys and Compounds 2025 / art. 182292 <https://doi.org/10.1016/j.jallcom.2025.182292>

Efficient defect-driven cation exchange beyond the nanoscale semiconductors toward antibacterial functionalization

Polivtseva, Svetlana; Volobujeva, Olga; Kuznietsov, Ivan; Kaupmees, Reelika; Danilson, Mati; Krustok, Jüri; Molaiyan, Palanivel; Hu, Tao; Lassi, Ulla; **Klopov, Mihhail;** van Gog, Heleen; van Huis, Marijn A.; Kaur, Harleen; Ivask, Angela; Rosenberg, Merilin; Gathergood, Nicholas; Ni, Chaoying; **Grossberg-Kuusk, Maarja** ACS applied materials & interfaces 2024 / p. 62871-62882 <https://doi.org/10.1021/acsaami.4c11425> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Energy levels determination of Zn(O,Se) thin films

Abdalla, Akram; Danilson, Mati; Mikli, Valdek; Bereznev, Sergei Materials science in semiconductor processing 2023 / art. 107137 <https://doi.org/10.1016/j.mssp.2022.107137> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Enhanced photocatalytic activity of chemically deposited ZnO nanowires using doping and annealing strategies for water remediation

Gaffuri, Pierre; Dedova, Tatjana; Appert, Estelle; **Danilson, Mati; Oja Acik, Ilona** Applied surface science 2022 / art. 152323 <https://doi.org/10.1016/j.apsusc.2021.152323> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Enhanced visible and ultraviolet light-induced gas-phase photocatalytic activity of TiO₂ thin films modified by increased amount of acetylacetone in precursor solution for spray pyrolysis

Spiridonova, Jekaterina; Mere, Arvo; Krunks, Malle; Rosenberg, Merilin; Kahru, Anne; **Danilson, Mati; Kritševskaja, Marina; Oja Acik, Ilona** Catalysts 2020 / 21 p. : ill <https://doi.org/10.3390/catal10091011> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Enhancing NIR emission in ZnAl₂O₄:Nd,Ce nanofibers by co-doping with Ce and Nd: a promising biomarker material

with low cytotoxicity

Rojas Hernandez, Rocio Estefania; Rubio-Marcos, Fernando; Gorni, Giulio; Marini, Carlo; **Danilson, Mati;** Pascual, Laura; Ichikawa, Rodrigo Uchida; **Hussainova, Irina;** Fernandez, Jose Francisco Journal of materials chemistry C 2021 / p. 657-670 : ill <https://doi.org/10.1039/D0TC04752J> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Excitonic emission in heavily Ga-doped zinc oxide films grown on GaN

Shteplyuk, I.; Khranovskyy, D.; Gogova, D.; **Danilson, Mati;** **Krunks, Malle** Journal of luminescence 2020 / art. 117265, 10 p. : ill <https://doi.org/10.1016/j.jlumin.2020.117265> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Ferrocene introduced into 5-methylresorcinol-based organic aerogels

Erkhova, Ludmila V.; Presniakov, Igor A.; Afanasov, Michail I.; Lemenovskiy, Dmitry A.; Yu, Haojie; Wang, Li; **Danilson, Mati;** **Koel, Mihkel** Polymers 2020 / art. 1582 ; 12 p. : ill <https://doi.org/10.3390/polym12071582> [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

Gas-phase photocatalytic oxidation of VOCs on the TiO₂ thin films

Sydorenko, Jekaterina; **Danilson, Mati;** **Mere, Arvo;** **Krunks, Malle;** **Kritševskaja, Marina;** **Oja Acik, Ilona** GSFMT Scientific Conference 2021 : Tartu, June 14-15, 2021 : abstracts 2021 / O 10 https://fmttk.ut.ee/wp-content/uploads/2021/06/GSFMT_abstractbook_2021.pdf

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 ultra-thin TiO₂ films by spray pyrolysis on different substrates

Oja Acik, Ilona; Junolainen, Agne; **Mikli, Valdek;** **Danilson, Mati;** **Krunks, Malle** Applied surface science 2009 / 5, p. 1391-1394 : ill

High temperature tribological properties of Al₂O₃/NCD films investigated under ambient air conditions

Podgurski, Vitali; **Yashin, Maxim;** Jõgiaas, Taivo; **Viljus, Mart;** **Alamgir, Asad;** **Danilson, Mati;** **Bogatov, Andrei** Coatings 2020 / art. 175, 13 p. : ill <https://doi.org/10.3390/coatings10020175> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Highly active wood-derived nitrogen-doped carbon catalyst for the oxygen reduction reaction

Kaare, Kätlin; Yu, Eric; Volperts, Aleksandrs; Dobeles, Galina; Zhurinsk, Aivars; Dyck, Alexaner; Niaura, Gediminas; Tamasauskaitė-Tamasiunaite, Loreta; Norkus, Eugenijus; Andrulevičius, Mindaugas; **Danilson, Mati;** Kruusenberg, Ivar ACS omega 2020 / p. 23578-23587 : ill <https://doi.org/10.1021/acsomega.0c01974> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

High-temperature tribological performance of Al₂O₃/a-C:H:Si coating in ambient air

Podgurski, Vitali; **Alamgir, Asad;** **Yashin, Maxim;** Jõgiaas, Taivo; **Viljus, Mart;** **Raadik, Taavi;** **Danilson, Mati;** **Sergejev, Fjodor;** Lümekmann, Andreas; Kluson, Jan; Sondor, Jozef; **Bogatov, Andrei** Coatings 2021 / art. 495, 15 p. : ill <https://doi.org/10.3390/coatings11050495> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

In Ambient Air Processed Cu₂ZnSnS₄ Absorber Layers from DMSO-Based Precursors: Enhanced Efficiency via Device Post-annealing

Nasyori, Achmad; **Pilvet, Maris;** **Saar, Annabel;** **Krustok, Jüri;** **Danilson, Mati;** **Kaupmees, Reelika;** **Mikli, Valdek;** Gong, Yuancai; **Grossberg-Kuusk, Maarja;** **Kauk-Kuusik, Marit** Journal of Materials Chemistry A 2025 <https://doi.org/10.1039/D5TA04554A>

Influence of order-disorder in Cu₂ZnSnS₄ powders on the performance of monograin layer solar cells

Timmo, Kristi; **Kauk-Kuusik, Marit;** **Pilvet, Maris;** **Raadik, Taavi;** **Altosaar, Mare;** **Danilson, Mati;** **Grossberg, Maarja;** **Raudoja, Jaan;** Ernits, Kaia Thin solid films 2017 / p. 122-126 : ill <https://doi.org/10.1016/j.tsf.2016.10.017> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Iron triad-based bimetallic M-N-C nanomaterials as highly active bifunctional oxygen electrocatalysts

Alam, Mahboob; **Ping, Kefeng;** **Danilson, Mati;** **Mikli, Valdek;** Käär, Maike; Leis, Jaan; Aruväli, Jaan; Paiste, Päärn; Rahn, Mihkel; Sammelselg, Väino; Tammeveski, Kaido; Haller, Steffen; Kramm, Ulrike Ingrid; **Starkov, Pavel;** Kongi, Nadezda ACS Applied Energy Materials 2024 / p. 4076 - 4087 <https://doi.org/10.1021/acsaem.4c00366> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [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

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](#)

A method for producing conductive graphene biopolymer nanofibrous fabrics by exploitation of an ionic liquid dispersant in electrospinning

Javed, Kashif; Krumme, Andres; Viirsalu, Mihkel; Krasnou, Illia; Plamus, Tiia; Vassiljeva, Viktoria; Tarasova, Elvira; Savest, Natalja; Mere, Arvo; Mikli, Valdek; **Danilson, Mati; Kaljuvee, Tiit**; Lange, Sven Carbon 2018 / p. 148-156 : ill
<https://doi.org/10.1016/j.carbon.2018.08.034> <https://novaator.err.ee/873101/ttu-teadlaste-arendatud-tselluloosikangaga-saab-vajadusel-laadida-telefoni> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Naatriumiga legeerimise 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](#)

Nickel and nitrogen-doped bifunctional ORR and HER electrocatalysts derived from CO₂

Rommel, Anna-Liis; Ratso, Sander; Divitini, Giorgio; **Danilson, Mati; Mikli, Valdek; Uibu, Mai**; Aruväli, Jaan; Kruusenberg, Ivar ACS Sustainable Chemistry and Engineering 2022 / p. 134-145 <https://doi.org/10.1021/acssuschemeng.1c05250> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Nickel oxide films by chemical spray : effect of deposition temperature and solvent type on structural, optical, and surface properties

Chen, Zengjun; Dedova, Tatjana; Oja Acik, Ilona; Danilson, Mati; Krunks, Malle Applied surface science 2021 / art. 149118
<https://doi.org/10.1016/j.apsusc.2021.149118> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Photoluminescence and Raman spectroscopy of polycrystalline AgInTe₂

Jagomägi, Andri; Krustok, Jüri; Raudoja, Jaan; Grossberg, Maarja; Oja, Ilona; Krunks, Malle; Danilson, Mati Thin solid films 2005 / p. 246-249 : ill

Photoluminescence and Raman spectroscopy of polycrystalline AgInTe₂

Jagomägi, Andri; Krustok, Jüri; Raudoja, Jaan; Grossberg, Maarja; Oja, Ilona; Krunks, Malle; Danilson, Mati Thin solid films 2005 / p. 246-249 : ill

Photoluminescence properties of polycrystalline AgGaTe₂

Krustok, Jüri; Jagomägi, Andri; Grossberg, Maarja; Raudoja, Jaan; Danilson, Mati Solar energy materials and solar cells 2006 / 13, p. 1973-1982 : ill https://www.researchgate.net/publication/240431559_Photoluminescence_properties_of_polycrystalline_AgGaTe_2

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](#)

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

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

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](#)

Pyrite as prospective absorber material for monograin layer solar cell

Kristmann, Katriin; Altosaar, Mare; Raudoja, Jaan; Krustok, Jüri; Pilvet, Maris; Mikli, Valdek; Grossberg, Maarja; Danilson, Mati; Raadik, Taavi Thin Solid Films 2022 / art. 139068 : ill <https://doi.org/10.1016/j.tsf.2021.139068> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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](#)

Reaction pathway to Cu₂ZnSnSe₄ formation in CdI₂ : part 1. Chemical reactions and enthalpies in mixtures of CdI₂–ZnSe, CdI₂–SnSe, and CdI₂–CuSe

Leinemann, Inga; Nkwusi, Godswill; Timmo, Kristi; Volobujeva, Olga; Danilson, Mati; Raudoja, Jaan vt.ka Mäddasson, Jaan; Kaljuvee, Tiit; Traksmaa, Rainer; Altosaar, Mare; Meissner, Dieter *Journal of thermal analysis and calorimetry* 2018 / p.409 - 421 : ill <https://doi.org/10.1007/s10973-018-7102-5> [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](#)

Research in solar cell technologies at Tallinn University of Technology

Mellikov, Enn; Altosaar, Mare; Krunks, Malle; Krustok, Jüri; Varema, Tiit; Volobujeva, Olga; Grossberg, Maarja; Kaupmees, Liina; Dedova, Tatjana; Timmo, Kristi; Ernits, Kaia; Kois, Julia; Oja Acik, Ilona; Danilson, Mati; Bereznev, Sergei *Thin solid films* 2008 / 20, p. 7125-7134 : ill

Shungite-derived graphene as a carbon support for bifunctional oxygen electrocatalysts

Kazimova, Nargiz; Ping, Kefeng; Alam, Mahboob; Danilson, Mati; Merisalu, Maido; Aruväli, Jaan; Paiste, Päärm; Käärik, Maike; Mikli, Valdek; Leis, Jaan; Tammeveski, Kaido; Starkov, Pavel; Kongi, Nadežda *Journal of catalysis* 2021 / p. 178–187 <https://doi.org/10.1016/j.jcat.2021.01.004> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [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](#)

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

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](#)

Zirconium doped TiO₂ thin films deposited by chemical spray pyrolysis

Juma, Albert Owino; Oja Acik, Ilona; Oluwabi, Abayomi Titilope; Mere, Arvo; Mikli, Valdek; Danilson, Mati; Krunks, Malle *Applied surface science* 2016 / p. 539-545 : ill <https://doi.org/10.1016/j.apsusc.2016.06.093> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

ZnO grown by chemical solution deposition

Kauk, Marit; Muska, Katri; Altosaar, Mare; Danilson, Mati; Öunpuu, K.; Varema, Tiit; Volobujeva, Olga *35th IEEE Photovoltaic Specialists Conference : Honolulu, HI, June 20-25, 2010 : conference proceedings 2010 / p. 002452-002456* : ill <https://ieeexplore.ieee.org/document/5614047>

Temperature dependence of Cu₂ZnSn(SexS_{1-x})₄ monograin solar cells

Krustok, Jüri; Josepson, Raavo; Danilson, Mati; Meissner, Dieter *Solar energy* 2010 / 3, p. 379-383 : ill http://www.quantisol.org/pub/pub10_08.pdf

Temperature dependent current transport properties in Cu₂ZnSnS₄ 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 electrical properties of kesterite monograin layer solar cells = Kesteriitsete monoterakihiliste päikesepatareide elektriliste omaduste temperatuursõltuvused

Danilson, Mati 2016 <https://digi.lib.ttu.ee/i/?5113> https://www.ester.ee/record=b4565639*est

The effect of Ag alloying of Cu₂(Zn,Cd)SnS₄ 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 S/Se ratio on the properties of Cu₂CdGe(SxSe_{1-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://fmtdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

The effect of sodium doping to CuInSe₂ monograin powder properties

Timmo, Kristi; Altosaar, Mare; Raudoja, Jaan; Mellikov, Enn; Varema, Tiit; Danilson, Mati; Grossberg, Maarja Thin solid films 2007 / 15, p. 5887-5890

The influence of doping with donor type impurities on the properties of CuInSe₂

Kauk, Marit; Altosaar, Mare; Raudoja, Jaan; Timmo, Kristi; Varema, Tiit; Danilson, Mati; Grossberg, Maarja; Mellikov, Enn Physica status solidi (c) 2008 / 2, p. 609-611 : ill <https://onlinelibrary.wiley.com/doi/abs/10.1002/pssc.200776831>

The performance of CuInSe₂ monograin layer solar cells with variable indium content

Kauk, Marit; Altosaar, Mare; Raudoja, Jaan; Jagomägi, Andri; Danilson, Mati; Varema, Tiit Thin solid films 2007 / 15, p. 5880-5883

Vanadium and carbon composite electrocatalyst for oxygen reduction reaction

Zarmehri, Ehsan; Raudsepp, Ragle; Danilson, Mati; Šutka, A.; Kruusenberg, Ivar Materials chemistry and physics 2023 / art. 128162, 10 p. : ill <https://doi.org/10.1016/j.matchemphys.2023.128162> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Õhukeste TiO₂ kilede kasv erinevatel alustel pihustuspürolüüsi meetodil

Junolainen, Agne; Oja Acik, Ilona; Mikli, Valdek; Danilson, Mati; Krunks, Malle XXXI Eesti keemiapäevad : [28. aprill 2010, Tallinn] : teaduskonverentsi teesid = 31st Estonian Chemistry Days : abstracts of scientific conference 2010 / lk. 35

XPS study of CZTSSe monograin powders

Danilson, Mati; Altosaar, Mare; Kauk, Marit; Katerski, Atanas; Krustok, Jüri; Raudoja, Jaan Thin solid films 2011 / p. 7407-7411 : ill

XPS study of OH impurity in solution processed CdS thin films

Maticiuc, Natalia; Katerski, Atanas; Danilson, Mati; Krunks, Malle; Hiie, Jaan Solar energy materials and solar cells 2017 / p. 211-216 : ill <https://doi.org/10.1016/j.solmat.2016.10.040> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS