

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> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Application of ultrasonic sprayed zirconium oxide dielectric in zinc tin oxide-based thin film transistor

Oluwabi, Abayomi Titilope; Katerski, Atanas; Carlos, Emanuel; Branquinho, Rita; **Mere, Arvo; Krunks, Malle;** Fortunato, Elvira; Pereira, Luis; **Oja Acik, Ilona** Journal of materials chemistry C 2020 / p. 3730-3739 : ill <https://doi.org/10.1039/C9TC05127A> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Characterization of sprayed CuInS₂ films annealed in hydrogen sulfide atmosphere

Krunks, Malle; Mere, Arvo; Katerski, Atanas; Mikli, Valdek; Krustok, Jüri Thin solid films 2006 / p. 434-438 : ill

Chemical composition of sprayed copper indium disulfide films for nanostructured solar cells = Pihustatud vaskindiumdisulfiid-kilede keemiline koostis ja rakendus nanostruktuursetes päikesepatareides

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

Combinative solution processing and Li doping approach to develop p-type NiO thin films with enhanced electrical properties

Oluwabi, Abayomi Titilope; Spalatu, Nicolae; Maticiu, Natalia; **Katerski, Atanas; Mere, Arvo; Krunks, Malle; Oja Acik, Ilona** Frontiers in materials 2023 / 12 p. : ill <https://doi.org/10.3389/fmats.2023.1060420> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A comparative study on physical properties of Al-doped zinc oxide thin films deposited from zinc acetate and zinc acetylacetonate by spray pyrolysis

Eensalu, Jako Siim; Krunks, Malle; Gromöko, Inga; Katerski, Atanas; Mere, Arvo Energetika 2017 / p. 46-55 : ill <https://doi.org/10.6001/energetika.v63i2.3519> [Journal metrics at Scopus](#) [Article at Scopus](#)

A comparative study on physical properties of Al-doped zinc oxide thin films deposited from zinc acetate and zinc acetylacetonate solutions by spray pyrolysis

Eensalu, Jako Siim; Krunks, Malle; Gromöko, Inga; Katerski, Atanas; Mere, Arvo The 14th International Conference of Young Scientists on Energy Issues : Kaunas, Lithuania, May 25-26, 2017 2017 / p. X-332 http://cyseni.com/archives/proceedings/Proceedings_of_CYSENI_2017.pdf

Copper indium disulfide films by chemical spray pyrolysis for photovoltaics

Krunks, Malle; Mere, Arvo; Katerski, Atanas Proceedings of the International Conference on Solar Cells : IC-SOLACE 2008 : January 21-23, 2008, Cochin, India 2008 / p. 16-19

Corrigendum to “An alternative chlorine-assisted optimization of CdS/Sb₂Se₃ solar cells: Towards understanding of chlorine incorporation mechanism” [J. Alloy. Compd. 1005 (2024)

176175](S0925838824027622)(10.1016/j.jallcom.2024.176175)

Vadakkedath Gopi, Sajeesh; Spalatu, Nicolae; Katerski, Atanas; Kuliček, Jaroslav; Rezek, Bohuslav; Ukraintsev, Egor; Bařínková, Markéta Šlapal; Zoppi, Guillaume; **Krunks, Malle; Acik, Ilona Oja** Journal of alloys and compounds 2024 / art. 176729, 1 p <https://doi.org/10.1016/j.jallcom.2024.176729> [Journal metrics at Scopus](#) [Article at Scopus](#)

Corrigendum to “Screening and optimization of processing temperature for Sb₂Se₃ thin film growth protocol: Interrelation between grain structure, interface intermixing and solar cell performance” [Solar Energy Mater. Solar Cell. 225 (2021) 1–13 111045](S092702482100088X)(10.1016/j.solmat.2021.111045)

Spalatu, Nicolae; Krautmann, Robert; Katerski, Atanas; Kärber, Erki; Josepson, Raavo; Hiie, Jaan; Oja Acik, Ilona; Krunks, Malle Solar Energy Materials and Solar Cells 2021 / Art. 111098 <https://doi.org/10.1016/j.solmat.2021.111098> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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>

Crystal quality studies of CuInS₂ films prepared by spray pyrolysis

Oja, Ilona; Nanu, M.; Katerski, Atanas; Krunks, Malle; Mere, Arvo; Raudoja, Jaan; Goossens, A. Thin solid films 2005 / p. 82-86 : ill

CuInS₂ kilede koostise uurimine XPS meetodil

Katerski, Atanas; Danilson, Mati; Mere, Arvo; Krunks, Malle XXXI Eesti keemiapäevad : [28. aprill 2010, Tallinn] :

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](#)

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>

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 (GSFMT) Scientific Conference : abstracts 2022 / 9 l. [Graduate School of Functional Materials and Technology \(GSFMT\) Scientific Conference 2022](#)

Development of spray pyrolysis-synthesised Bi₂O₃ thin films for photocatalytic applications

Sydorenko, Jekaterina; Krunks, Malle; Katerski, Atanas; Grzibovskis, Raitis; Vembris, Aivars; Mere, Arvo; **Spalatu, Nicolae; Oja Acik, Ilona** RSC advances 2024 / p. 19648-19657 <https://doi.org/10.1039/D4RA02907K> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Development of sprayed CuInS₂ thin film absorber for nanostructured solar cell

Katerski, Atanas; Kärber, Erki; Krunks, Malle; Mikli, Valdek; Mere, Arvo Materials Research Society symposium proceedings 2012 https://www.researchgate.net/publication/271903084_Development_of_sprayed_CuInS2_thin_film_absorber_for_nanostructured_solar_cell

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](#)

Effect of H₂S treatment on properties of CuInS₂ thin films deposited by chemical spray pyrolysis at low temperature

Kärber, Erki; Katerski, Atanas; Oja Acik, Ilona; Mikli, Valdek; Mere, Arvo; Krunks, Malle Thin solid films 2011 / p. 7180-7183 : ill

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://fmdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

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 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

Electrodeposited molybdenum oxide coatings for thin film chalcopyrite solar cells

Ganchev, Maxim; Dimitrov, Dimiter; Stankova, Stanka; **Katerski, Atanas;** Gadjov, 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](#)

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> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics](#)

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; Gromöko, 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](#)

Extremely thin absorber layer nanostructured solar cell by chemical spray pyrolysis

Mere, Arvo; Katerski, Atanas; Dedova, Tatjana; Oja Acik, Ilona; Krunks, Malle Proceedings 23rd European Photovoltaic Solar Energy Conference : 1-5 September, 2008, Valencia, Spain 2008 / p. 2147-2150

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

Fluorene- and fluorenone-based molecules as electron-transporting SAMs for photovoltaic devices

Svirskaitė, Lauryna Monika; Kasparavicius, Ernestas; Steponaitis, Matas; Grzibovskis, Raitis; Franckevicius, Marius; **Katerski, Atanas;** Naujokaitis, Arnas; Karazhanov, Smagul; Gopi, Sajeesh Vadakkedath; Aizstrauts, Arturs RSC advances 2024 / p. 14973-14981 <https://doi.org/10.1039/D4RA00964A> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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/acsaeam.2c04097> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Gas sensing capability of spray deposited Al-doped ZnO thin films

Eensalu, Jako Siim; Katerski, Atanas; Mere, Arvo; Krunks, Malle Proceedings of the Estonian Academy of Sciences 2018 / p. 124–130 : ill <https://doi.org/10.3176/proc.2018.2.02> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Gas sensing capability of spray deposited Al-doped ZnO thin films [Online resource]

Eensalu, Jako Siim; Katerski, Atanas; Mere, Arvo; Krunks, Malle Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [7-8 märtsil 2018, Tallinn : teesid] GSFMT Scientific Conference 2018 : Tallinn, March 7-8, 2018 : abstracts 2018 / 1 p <http://fntdk.ut.ee/teesid-2018/>

Growth of ZnO rods on FTO electrodes by spray pyrolysis

Dedova, Tatjana; Volobujeva, Olga; Krunks, Malle; Mikli, Valdek; Gromöko, Inga; Katerski, Atanas; Mere, Arvo IOP conference series : materials science and engineering 2013 / [4] p. : ill <https://doi.org/10.1088/1757-899X/49/1/012001> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

High-K ZrO₂ thin films by chemical spray pyrolysis method [Online resource]

Oluwabi, Abayomi Titilope; Oja Acik, Ilona; Katerski, Atanas; Krunks, Malle Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [7-8 märtsil 2018, Tallinn : teesid] GSFMT Scientific Conference 2018 : Tallinn, March 7-8, 2018 : abstracts 2018 / 1 p <http://fntdk.ut.ee/teesid-2018/>

In₂S₃ õhukeste kilede sadestamine pihustuspirolüüsi meetodil

Otto, Kairi; Katerski, Atanas; Mere, Arvo; Krunks, Malle XXXI Eesti keemiapäevad : [28. aprill 2010, Tallinn] : teaduskonverentsi teesid = 31st Estonian Chemistry Days : abstracts of scientific conference 2010 / lk. 60

Incorporation of plasmonic Au nanoparticles inside the CdTe thin film absorber

Maticiu, Natalia; Spalatu, Nicolae; Katerski, Atanas; Repan, T.; **Hiie, Jaan** NANOSMAT Conference, 22-25 September 2013, Granada, Spain : abstracts book 2013 / p. 341-342

Indium sulfide thin films deposited by chemical spray of aqueous and alcoholic solutions

Otto, Kairi; Katerski, Atanas; Volobujeva, Olga; Mere, Arvo; Krunks, Malle Energy procedia 2011 / p. 63-69

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 post-UV/ozone treatment of ultrasonic-sprayed zirconium oxide dielectric films for a low-temperature oxide

thin film transistor

Oluwabi, Abayomi Titilope; Gaspar, Diana; **Katerski, Atanas; Mere, Arvo; Krunks, Malle**; Pereira, Luis; **Oja Acik, Ilona** Materials 2020 / art. 6, 14 p. : ill <https://doi.org/10.3390/ma13010006> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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](#)

Insights into TiO2 thin film photodegradation from Kelvin Probe AFM maps

Olukan, Tuza; **Sydorenko, Jekaterina; Katerski, Atanas**; Al Mahri, Mariam; Lai, Chia-Yun; Al-Hagri, Abdulrahman; Santos, Sergio; **Chiesa, Matteo** Applied physics letters 2022 / art. 031901 <https://doi.org/10.1063/5.0098788> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

In-situ deposition of gold nanoparticles onto different substrates by chemical spray pyrolysis

Oja Acik, Ilona; Oyekoya, Gboyega Nathaniel; Mere, Arvo; Katerski, Atanas; Mikli, Valdek; Krunks, Malle IOP conference series : materials science and engineering 2015 / 5 p. : ill <https://doi.org/10.1088/1757-899X/77/1/012009> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Keemilistel meetoditel sadestatud õhukesed kiled päikeseenergeetikale

Krunks, Malle; Oja, Ilona; Dedova, Tatjana; Mere, Arvo; Katerski, Atanas; Hiie, Jaan XXIX Eesti keemiapäevad : teaduskonverentsi ettekannete teesid = 29th Estonian Chemistry Days : abstracts of scientific conference 2005 / lk. 47

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](#)

Modification of light absorption in thin CuInS2 films by sprayed Au nanoparticles

Katerski, Atanas; Kärber, Erki; Oja Acik, Ilona; Dolgov, Leonid; Mere, Arvo; Sildos, Ilmo; Mikli, Valdek; Krunks, Malle Nanoscale research letters 2014 / p. 1-6 : ill <https://doi.org/10.1186/1556-276X-9-494> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Modification of light absorption in thin CuInS2 films by sprayed gold nanoparticles

Mere, Arvo; Katerski, Atanas; Oja Acik, Ilona; Dolgov, Leonid; Sildos, Ilmo; Krunks, Malle NANOSMAT Conference, 22-25 September 2013, Granada, Spain : abstracts book 2013

Nanostructured solar cell based on spray pyrolysis deposited ZnO nanorod array

Krunks, 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 cell by spray pyrolysis : effect of titania barrier layer on the cell performance

Oja Acik, Ilona; Katerski, Atanas; Mere, Arvo; Aarik, Jaan; Aidla, Aleks; Dedova, Tatjana; Krunks, Malle Thin solid films 2009 / p. 2443-2447 : ill <https://doi.org/10.1016/j.tsf.2008.11.018>

Niobium doped TiO2 films by chemical spray pyrolysis [Online resource]

Dündar, Ibrahim; Oja Acik, Ilona; Mere, Arvo; Katerski, Atanas; Krunks, Malle; Mikli, Valdek Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [7-8 märts 2017, Tartu : teesid] 2017 / [1] p <http://fntdk.ut.ee/teesid/>

Niobium doped TiO2 layers by chemical spray pyrolysis

Dündar, Ibrahim; Oja Acik, Ilona; Mere, Arvo; Katerski, Atanas; Krunks, Malle; Mikli, Valdek Proceedings of 13th International Conference of Young Scientists on Energy Issues : CYSENI 2016 : May 26-27 2016, Kaunas, Lithuania 2016 / p. VII-241 - VII-250

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>

Photocatalytic degradation of different VOCs in the gas-phase over TiO2 thin films prepared by ultrasonic spray pyrolysis

Dundar, Ibrahim; Kritševskaja, Marina; Katerski, Atanas; Krunks, Malle; Oja Acik, Ilona Catalysts 2019 / art. 915 ; 18 p. : ill
<https://doi.org/10.3390/catal9110915> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Photocatalytic TiO₂ thin films by ultrasonic spray pyrolysis for air purification

Dündar, Ibrahim; Kritševskaja, Marina; Katerski, Atanas; Krunks, Malle; Oja Acik, Ilona GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 21 <http://fntdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

Pihustatud vaskindiumdisulfiid kilede keemiline koostis

Katerski, Atanas; Krunks, Malle XXXII Eesti Keemiapäevad : teaduskonverentsi teesid 2011 / lk. 39

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

Repän, Taavi; **Katerski, Atanas; Oja Acik, Ilona; Kärber, 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

Repän, Taavi; **Katerski, Atanas; Oja Acik, Ilona; Kärber, 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

Plasmonic modification of CdTe thin films by gold nanoparticles : methods, difficulties and solutions

Maticiu, Natalia; Spalatu, Nicolae; Katerski, Atanas; Hiie, Jaan; Mikli, Valdek; Krunks, Malle; Dolgov, Leonid; Sildos, Ilmo Microelectronic engineering 2014 / p. 173-178 : ill <https://doi.org/10.1016/j.mee.2014.07.016> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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](#)

A post-deposition annealing approach for organic residues control in TiO₂ and its impact on Sb₂Se₃/TiO₂ device performance

Koltsov, Mykhailo; Krautmann, Robert; Katerski, Atanas; Maticiu, Natalia; Krunks, Malle; Oja Acik, Ilona; Spalatu, Nicolae Faraday Discussions 2022 / p. 273-286 <https://doi.org/10.1039/D2FD00064D> [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://fntdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

Post-deposition thermal treatment of sprayed SnS films

Polivtseva, Svetlana; Katerski, Atanas; Kärber, Erki; Oja Acik, Ilona; Mere, Arvo; Mikli, Valdek; Krunks, Malle Thin solid films 2017 / p. 179-184 : ill <https://doi.org/10.1016/j.tsf.2017.01.014> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Post-deposition thermal treatment of sprayed SnS films [Online resource]

Polivtseva, Svetlana; Katerski, Atanas; Kärber, Erki; Oja Acik, Ilona; Mere, Arvo; Mikli, Valdek; Krunks, Malle Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [7-8 märts 2017, Tartu : teesid] 2017 / [1] p <http://fntdk.ut.ee/teesid/>

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>

Raman spectroscopic study of In₂S₃ films prepared by spray pyrolysis

Kärber, Erki; Otto, Kairi; Katerski, Atanas; Mere, Arvo; Krunks, Malle Materials science in semiconductor processing 2014 / p. 137-142 : ill <https://doi.org/10.1016/j.mssp.2013.10.007> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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 film solar cells by ultrasonic spray pyrolysis

Eensalu, Jako Siim; Katerski, Atanas; Kärber, Erki; Oja Acik, Ilona; Krunks, Malle GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 22 <http://fntdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

Sb₂S₃ thin films by ultrasonic spray in air : formation and application insolar cells

Krunks, Malle; Eensalu, Jako Siim; Kriisa, Merike; Tõnsuaadu, Kaia; Katerski, Atanas; Hussein, H.; Asare, E.; Spalatu, Nicolae; Oja Acik, Ilona JTACC+V4 2025 : 4th Journal of Thermal Analysis and Calorimetry Conference & 10th V4 (Joint Czech-Hungarian-Polish-Slovak) Thermoanalytical Conference : Book of Abstracts 2025 / p. 86
<https://static.akcongress.com/downloads/jtacc/jtacc2025/jtacc2025-boa.pdf>

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

Screening and optimization of processing temperature for Sb₂Se₃ thin film growth protocol : interrelation between grain structure, interface intermixing and solar cell performance

Spalatu, Nicolae; Krautmann, Robert; Katerski, Atanas; Kärber, Erki; Josepson, Raavo; Hiie, Jaan; Oja Acik, Ilona; Krunks, Malle Solar energy materials and solar cells 2021 / art. 111045, 13 p. : ill <https://doi.org/10.1016/j.solmat.2021.111045> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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](#)

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

Solution processed high-K oxides for application as gate dielectric layer in thin film transistor

Oluwabi, Abayomi Titilope; Katerski, Atanas; Mere, Arvo; Krunks, Malle; Oja Acik, Ilona GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 67 : ill <http://fntdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.p>

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](#)

Spray pyrolysis deposition of indium sulphide thin films

Otto, Kairi; Katerski, Atanas; Mere, Arvo; Volobujeva, Olga; Krunks, Malle Thin solid films 2011 / p. 3055-3060 : ill

Spray pyrolysis deposition of SnxSy thin films

Polivtseva, Svetlana; Oja Acik, Ilona; Katerski, Atanas; Mere, Arvo; Mikli, Valdek; Krunks, Malle Energy procedia 2014 / p. 156-165 : ill <https://doi.org/10.1016/j.egypro.2014.12.358> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Structural and electrical characterisation of high-k ZnO₂ thin films deposited by chemical spray pyrolysis method Oluwabi, Abayomi Titilope; Oja Acik, Ilona; Katerski, Atanas; Mere, Arvo; Krunks, Malle Thin Solid Films 2018 / p. 129 - 136 <https://doi.org/10.1016/j.tsf.2018.07.035> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Surface analysis of spray deposited copper indium disulfide films

Katerski, Atanas; Mere, Arvo; Kazlauskienė, Vida; Miskinis, Juozas; Saar, Agu; Matisen, Leonard; Kikas, Arvo; **Krunks, Malle** Thin solid films 2008 / p. 7110-7115 : 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](#) [Article at WOS](#)

Surface properties of sprayed and electrodeposited ZnO rod layers

Gromōko, Inga; Krunks, Malle; Dedova, Tatjana; Katerski, Atanas; Klauson, Deniss; Oja Acik, Ilona Applied surface science 2017 / p. 521-528 : ill <https://doi.org/10.1016/j.apsusc.2017.02.065> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Surface wetting properties of electrodeposited and sprayed ZnO nanorod layers [Online resource]

Gromōko, Inga; Krunks, Malle; Dedova, Tatjana; Katerski, Atanas; Klauson, Deniss; Oja Acik, Ilona Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [7-8 märts 2017, Tartu : teesid] 2017 / [1] p <http://fntdk.ut.ee/teesid/>

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 nanostructures by wet chemical deposition methods [Online resource]

Gromōko, Inga; Dedova, Tatjana; Krunks, Malle; Oja Acik, Ilona; Katerski, Atanas; Klauson, Deniss Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [7-8 märtsil 2018, Tallinn : teesid] GSFMT Scientific Conference 2018 : Tallinn, March 7-8, 2018 : abstracts 2018 / 1 p <http://fntdk.ut.ee/teesid-2018/>

ZnO/NiO heterostructures with enhanced photocatalytic activity obtained by ultrasonic spraying of a NiO shell onto ZnO nanorods

Chen, Zengjun; Dedova, Tatjana; Spalatu, Nicolae; Maticiu, Natalia; Rusu, Marin; **Katerski, Atanas; Oja Acik, Ilona;** Unold, Thomas; **Krunks, Malle** Colloids and surfaces A : physicochemical and engineering aspects 2022 / art. 129366 <https://doi.org/10.1016/j.colsurfa.2022.129366> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

ZnO/TiO₂/Sb₂S₃ core-shell nanowire heterostructure for extremely thin absorber solar cells

Parize, Romain; **Katerski, Atanas; Gromōko, Inga;** Rapenne, Laetitia; Roussel, Hervé; **Kärber, Erki;** Appert, Estelle; **Krunks, Malle;** Consonni, Vincent Journal of physical chemistry C 2017 / p. 9672-9680 : ill <https://doi.org/10.1021/acs.jpcc.7b00178> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Thermoanalytical study of a precursor for CuInS₂ thin films deposited by chemical spray pyrolysis

Oja Acik, Ilona; Otto, Kairi; Tõnsuaadu, Kaia; Katerski, Atanas; Niinistö, L.; **Krunks, Malle** ESTAC10 : 10th European Symposium on Thermal Analysis and Calorimetry : August 22-27, 2010, Rotterdam, The Netherlands : abstract book 2010 / p. 175

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](#)

Tin sulfide films by chemical spray pyrolysis : formation and properties = Tinasulfiid kiled keemilise pihustuspürolüüsi meetodil : moodustumine ja omadused

Polivtseva, Svetlana 2018 <https://digi.lib.ttu.ee/i/?9416> https://www.ester.ee/record=b4767116*est

Tin sulfide films by spray pyrolysis technique using L-cysteine as a novel sulfur source

Polivtseva, Svetlana; Oja Acik, Ilona; Katerski, Atanas; Mere, Arvo; Mikli, Valdek; Krunks, Malle Physica status solidi (c) 2016 / p. 18-23 : ill <https://doi.org/10.1002/pssc.201510098> [Journal metrics at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

TiO₂ thin films by ultrasonic spray pyrolysis as photocatalytic material for air purification

Dündar, Ibrahim; Kritševskaja, Marina; Katerski, Atanas; Oja Acik, Ilona Royal Society open science 2019 / art. 181578, 12 p. : ill <https://doi.org/10.1098/rsos.181578> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

TiO₂ thin films by ultrasonic spray pyrolysis for photocatalytic air-cleaning applications = TiO₂ õhukesed kiled ultraheli pihustuspürolüüsi meetodil õhu fotokatalüütiliseks puhastamiseks

Dündar, Ibrahim 2021 https://www.ester.ee/record=b5408882*est <https://digikogu.taltech.ee/et/Item/266d75a3-ff2e-4bcf-aa54-2151511e871f>
<https://doi.org/10.23658/taltech.13/2021>

Titania thin films by by chemical spray pyrolysis as photocatalytic materials for air purification [Online resource]

Dündar, Ibrahim; Katerski, Atanas; Kritševskaja, Marina; Oja Acik, Ilona; Krunks, Malle Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [7-8 märtsil 2018, Tallinn : teesid] GSFMT Scientific Conference 2018 : Tallinn, March 7-8, 2018 : abstracts 2018 / 1 p <http://fmdtk.ut.ee/teesid-2018/>

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>

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://fmdtk.ut.ee/teesid-2019/>

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](#)

X-ray photoelectron spectroscopy of spray pyrolysis deposited copper indium disulfide films

Katerski, Atanas; Kazlauskienė, Vida; Miskinis, Juozas; Krunks, Malle AOMD-5 : 5th International Conference Advanced Optical Materials and Devices : Vilnius, Lithuania, 27-30 August, 2006 : program and abstracts 2006 / p. 20