

**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 CulnS<sub>2</sub> 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 vaskindiumidisulfiid-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>

**A comparative study on physical properties of Al-doped zinc oxide thin films deposited from zinc acetate and zinc acetylacetone by spray pyrolysis**  
**Eensalu, Jako Siim; Krunks, Malle; Gromõko, Inga; Katerski, Atanas; Mere, Arvo** Energetika 2017 / p. 46-55 : ill  
<https://doi.org/10.6001/energetika.v63i2.3519>

**A comparative study on physical properties of Al-doped zinc oxide thin films deposited from zinc acetate and zinc acetylacetone solutions by spray pyrolysis**  
**Eensalu, Jako Siim; Krunks, Malle; Gromõko, 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](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 “Screening and optimization of processing temperature for Sb<sub>2</sub>Se<sub>3</sub> 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 Sb<sub>2</sub>S<sub>3</sub> absorber-based solar cells**

**Mandati, Sreekanth; Juneja, Nimish; Katerski, Atanas; Jegorove, Aiste; Daskeviciute-Geguziene, Sarune; Grzibovskis, Raitis; Vembrišas, 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 CulnS<sub>2</sub> 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

**CulnS<sub>2</sub> kilede koostise uurimine XPS meetodil**

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

**CulnS<sub>2</sub> 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

**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 sprayed CulnS<sub>2</sub> 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 CulnS<sub>2</sub> thin film absorber for nanostructured solar cell](#)

**Effect of H<sub>2</sub>S treatment on properties of CuInS<sub>2</sub> 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 CuInS<sub>2</sub> 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 TiO<sub>2</sub> thin films**  
Spiridonova, Jekaterina; Katerski, Atanas; Danilson, Mati; Kritsevskaja, 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 TiO<sub>2</sub> thin films : [conference paper]**

Spiridonova, Jekaterina; Katerski, Atanas; Danilson, Mati; Kritsevskaja, Marina; Krunks, Malle; Oja Acik, Ilona GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 78 <http://fmtdk.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

**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, Dimitar; 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

**Employment of dopant-free fluorene-based enamines as innovative hole transport materials to boost the transparency and performance of Sb<sub>2</sub>S<sub>3</sub> 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>

**Enhanced photocatalytic activity of ZnO nanorods by surface treatment with HAuCl<sub>4</sub> : synergic effects through an electron scavenging, plasmon resonance and surface hydroxylation**

Dedova, Tatjana; Oja Acik, Ilona; Chen, Zengjun; Katerski, Atanas; Balmassov, Kirill; Gromoko, Inga; Nagyne-Kovacs, T.; Szilagi, 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

**Extremly 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

**Extremly 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, Laurynas Monika; Kasparavicius, Ernestas; Steponaitis, Matas; Grzibovskis, Raitis; Frankevicius, Marius; Katerski, Atanas; Naujokaitis, Arnas; Karazhanov, Smagul; Gopi, Sajeesh Vadakkedath; Aizstrauts, Arturs RSC advances 2024 / p. 14973-14981 <https://doi.org/10.1039/D4RA00964A>

**4.9 % efficient Sb<sub>2</sub>S<sub>3</sub> 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>

**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://fmtdk.ut.ee/teesid-2018/>

**Growth of ZnO rods on FTO electrodes by spray pyrolysis**

**Dedova, Tatjana; Volobujeva, Olga; Krunks, Malle; Mikli, Valdek; Gromõko, Inga; Katerski, Atanas; Mere, Arvo** IOP conference series : materials science and engineering 2013 / [4] p. : ill

**High-K ZrO<sub>2</sub> 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://fmtdk.ut.ee/teesid-2018/>

**In<sub>2</sub>S<sub>3</sub> õhukeste kilede sadestamine pihustuspürolüüsmeetodil**

**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**

**Maticiuc, 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 Sb<sub>2</sub>S<sub>3</sub> 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/ma1301006> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

**Influence of vapour transport deposition conditions on properties of SB<sub>2</sub>SE<sub>3</sub> 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 TiO<sub>2</sub> 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 / p. 1-5 : ill

**Keemilistel meetoditel sadestatud õhukesed kiled päikeseeenergeetikale**

**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

**Modification of light absorption in thin CuInS<sub>2</sub> 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

**Modification of light absorption in thin CuInS<sub>2</sub> 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 TiO<sub>2</sub> 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://fmtdk.ut.ee/teesid/>

### **Niobium doped TiO<sub>2</sub> 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 Sb<sub>2</sub>S<sub>3</sub> 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](#)

### **Photocatalytic degradation of different VOCs in the gas-phase over TiO<sub>2</sub> thin gilms 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 TiO<sub>2</sub> 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://fmtdk.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; Maticiuc, 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; Maticiuc, Natalia; Krunks, Malle; Katerski, Atanas; Mikli, Valdek; Sildos, Ilmo** Applied surface science 2015 / p. 69-73 : ill <http://dx.doi.org/10.1016/j.apsusc.2015.04.065>

### **Plasmonic enhancement of light absorption in CuInS<sub>2</sub> 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**

**Maticiuc, Natalia; Spalatu, Nicolae; Katerski, Atanas; Hiie, Jaan; Mikli, Valdek; Krunks, Malle; Dolgov, Leonid; Sildos, Ilmo** Microelectronic engineering 2014 / p. 173-178 : ill

### **Post deposition annealing effect on properties of CdS films and its impact on CdS/Sb<sub>2</sub>Se<sub>3</sub> 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>

**A post-deposition annealing approach for organic residues control in TiO<sub>2</sub> and its impact on Sb<sub>2</sub>Se<sub>3</sub>/TiO<sub>2</sub> 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 Sb<sub>2</sub>Se<sub>3</sub> thin films absorber layer grown by close-spaced sublimation**

**Krautmann, Robert; Spalatu, Nicolae; Hiiie, Jaan; Katerski, Atanas; Oja Acik, Ilona; Krunks, Malle** GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 47 <http://fmtdk.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>

**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://fmtdk.ut.ee/teesid/>

**Raman spectroscopic study of In<sub>2</sub>S<sub>3</sub> 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

**Sb<sub>2</sub>S<sub>3</sub> 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>

**Sb<sub>2</sub>S<sub>3</sub> 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; Vembri, 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

**SB<sub>2</sub>S<sub>3</sub> 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://fmtdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

**Sb<sub>2</sub>S<sub>3</sub> õhukesed absorberkhiid 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](https://www.ester.ee/record=b1580289*est)

**Screening and optimization of processing temperature for Sb<sub>2</sub>Se<sub>3</sub> thin film growth protocol : interrelation between grain structure, interface intermixing and solar cell performance**

**Spalatu, Nicolae; Krautmann, Robert; Katerski, Atanas; Kärber, Erki; Josepson, Raavo; Hiiie, 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 Sb<sub>2</sub>S<sub>3</sub> 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://fmtdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.p>

**Spin - coating of SnO<sub>2</sub> 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

**Structural and electrical characterisation of high-k ZrO<sub>2</sub> thin films deposited by chemical spray pyrolysis method**  
Oluwabi, Abayomi Titilope; Acik, Ilona Oja; 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; Kazlauskiene, 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

Gromöko, 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 <http://dx.doi.org/10.1002/pssc.201510103>

#### Surface properties of sprayed and electrodeposited ZnO rod layers

Gromöko, 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>

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

Gromöko, 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://fmtdk.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]

Gromöko, 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] GSFM Scientific Conference 2018 : Tallinn, March 7-8, 2018 : abstracts 2018 / 1 p <http://fmtdk.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; Maticiuc, 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](#)

#### Thermoanalytical study of a precursor for CuInS<sub>2</sub> thin films deposited by chemical spray pyrolysis

Oja Acik, Ilona; Otto, Kairi; Tönsuaadu, Kaia; Katerski, Atanas; Niinistö, L.; Krunks, Malle ESTAC10 : 10th European Symposium on Thermal Analysis and Calorimetry : August 22-27, 2010, Rotterdam, The Netherland : 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 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 <http://dx.doi.org/10.1002/pssc.201510098>

#### TiO<sub>2</sub> 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](#)

#### Titania thin films 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] GSFM Scientific Conference 2018 : Tallinn, March 7-8, 2018 : abstracts 2018 / 1 p <http://fmtdk.ut.ee/teesid-2018/>

#### Uniform Sb<sub>2</sub>S<sub>3</sub> 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 Sb<sub>2</sub>S<sub>3</sub> 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

**XPS study of CZTSSe monograins 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 <http://dx.doi.org/10.1016/j.solmat.2016.10.040>

**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