Levent GÃ¼tay

List of Publications by Year
in descending order

69 papers	1,932 citations	304743 22 h-index	265206 42 g-index
72 all docs	72 docs citations	72 times ranked	1893 citing authors

#	Article	IF	Citations
1	Vapor-Phase Incorporation of Ge in CZTSe Absorbers for Improved Stability of High-Efficiency Kesterite Solar Cells. Applied Sciences (Switzerland), 2022, 12, 1376.	2.5	4
2	Optoelectronic Properties of MoS₂ in Proximity to Carrier Selective Metal Oxides. Advanced Optical Materials, 2022, 10, .	7.3	7
3	Steep sulfur gradient in CZTSSe solar cells by H₂S-assisted rapid surface sulfurization. RSC Advances, 2021, 11, 12687-12695.	3.6	7
4	SiOxNy back-contact barriers for CZTSe thin-film solar cells. PLoS ONE, 2021, 16, e0245390.	2.5	0
5	Rapid formation of large-area MoS2 monolayers by a parameter resilient atomic layer deposition approach. APL Materials, 2021, 9, .	5.1	5
6	Tuning of Precursor Composition and Formation Pathway of Kesterite Absorbers Using an Inâ€Process Composition Shift: A Path toward Higher Efficiencies?. Solar Rrl, 2021, 5, 2100237.	5.8	5
7	Micro-patterned deposition of MoS2 ultrathin-films by a controlled droplet dragging approach. Scientific Reports, 2021, 11, 13993.	3.3	5
8	Reaction Pathway for Efficient Cu₂ZnSnSe₄ Solar Cells from Alloyed Cuï£¿Sn Precursor via a Cuâ€Rich Selenization Stage. Solar Rrl, 2020, 4, 2000124.	5.8	13
9	Hybrid chemical bath deposition-CdS/sputter-Zn(O,S) alternative buffer for Cu2ZnSn(S,Se)4 based solar cells. Journal of Applied Physics, 2020, 127, .	2.5	2
10	The effect of excess selenium on the opto-electronic properties of Cu₂ZnSnSe₄ prepared from Cuâ€“Sn alloy precursors. RSC Advances, 2019, 9, 20857-20864.	3.6	7
11	Potential of CZTSe Solar Cells Fabricated by an Alloy-Based Processing Strategy. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2019, 74, 673-682.	1.5	5
12	Modifications of the CZTSe/Mo back-contact interface by plasma treatments. RSC Advances, 2019, 9, 26850-26855.	3.6	11
13	A vapor-phase-assisted growth route for large-scale uniform deposition of MoS₂ monolayer films. RSC Advances, 2019, 9, 107-113.	3.6	4
14	Physical routes for the synthesis of kesterite. JPhys Energy, 2019, 1, 042003.	5.3	34
15	Influence of Cu-Zn disorder in Cu2ZnSnSe4 absorbers on optical transitions: A spectroscopic ellipsometry study. Optical Materials, 2019, 93, 93-97.	3.6	2
16	Cu2SnS3 based thin film solar cells from chemical spray pyrolysis. Thin Solid Films, 2019, 669, 436-439.	1.8	39
17	Device Characteristics of an 11.4% CZTSe Solar Cell Fabricated from Sputtered Precursors. Advanced Energy Materials, 2018, 8, 1703295.	19.5	80
18	Influence of silver incorporation on CZTSSe solar cells grown by spray pyrolysis. Materials Science in Semiconductor Processing, 2018, 76, 31-36.	4.0	27

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19	Resilient and reproducible processing for CZTSe solar cells in the range of 10%. Progress in Photovoltaics: Research and Applications, 2018, 26, 1003-1006.	8.1	19
20	In-situ investigation of the order-disorder transition in Cu2ZnSnSe4 by optical transmission spectroscopy. AIP Advances, 2017, 7, 025303.	1.3	7
21	Depth-resolved and temperature dependent analysis of phase formation processes in Cuâ€“Znâ€“Snâ€“Se films on ZnO substrates. Journal of Materials Science: Materials in Electronics, 2017, 28, 7730-7738.	2.2	5
22	Improvement of the structural and electronic properties of CZTSSe solar cells from spray pyrolysis by a CuGe seed layer. RSC Advances, 2017, 7, 20406-20411.	3.6	11
23	In-situ XRD investigation of selenization of CZTS nanoparticles. Journal of Alloys and Compounds, 2017, 714, 35-38.	5.5	4
24	Optical properties of Cu_2ZnSnSe_4 thin films and identification of secondary phases by spectroscopic ellipsometry. Optics Express, 2017, 25, 5327.	3.4	13
25	Depth-resolved and temperature-dependent analysis of phase formation mechanisms in selenized Cu-Zn-Sn precursors by Raman spectroscopy. , 2016, , .		0
26	In-situ XRD investigation of re-crystallization and selenization of CZTS nanoparticles. Journal of Alloys and Compounds, 2016, 686, 24-29.	5.5	8
27	Detection of a MoSe2 secondary phase layer in CZTSe by spectroscopic ellipsometry. Journal of Applied Physics, 2015, 118, 185302.	2.5	8
28	CuInSe 2 semiconductor formation by laser annealing. Thin Solid Films, 2015, 582, 23-26.	1.8	9
29	The importance of Se partial pressure in the laser annealing of CuInSe<inf>2</inf> electrodeposited precursors. , 2014, , .		2
30	Discrimination and detection limits of secondary phases in Cu2ZnSnS4 using X-ray diffraction and Raman spectroscopy. Thin Solid Films, 2014, 569, 113-123.	1.8	98
31	Multiple phases of Cu2ZnSnSe4 detected by room temperature photoluminescence. Journal of Applied Physics, 2014, 116, .	2.5	12
32	Cu₂ZnSnSe₄ thin film solar cells produced via coâ€evaporation and annealing including a SnSe₂ capping layer. Progress in Photovoltaics: Research and Applications, 2014, 22, 51-57.	8.1	56
33	Why do we make Cu(In,Ga)Se2 solar cells non-stoichiometric?. Solar Energy Materials and Solar Cells, 2013, 119, 18-25.	6.2	119
34	Defect level signatures in CuInSe2 by photocurrent and capacitance spectroscopy. Thin Solid Films, 2013, 535, 366-370.	1.8	18
35	Direct Synthesis of Single-Phase p-Type SnS by Electrodeposition from a Dicyanamide Ionic Liquid at High Temperature for Thin Film Solar Cells. Journal of Physical Chemistry C, 2013, 117, 4383-4393.	3.1	70
36	Detecting ZnSe secondary phase in Cu2ZnSnSe4 by room temperature photoluminescence. Applied Physics Letters, 2013, 102, .	3.3	49

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37	The three A symmetry Raman modes of kesterite in Cu_2ZnSnSe_4. Optics Express, 2013, 21, A695.	3.4	45
38	Molecular beam epitaxy of Cu<inf>2</inf>ZnSnSe<inf>4</inf> thin films grown on GaAs(001). , 2013, , .		3
39	Vacancy defects in epitaxial thin film<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi mathvariant="bold">CuGaSe</mml:mi><mml:mn mathvariant="bold">2</mml:mn></mml:msub></mml:math>and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi mathvariant="bold">CuInSe</mml:mi><mml:mn mathvariant="bold">2</mml:mn></mml:msub></mml:math>. Physical Review B, 2012, 86, .	3.2	26
40	Degradation and passivation of CuInSe2. Applied Physics Letters, 2012, 101, .	3.3	60
41	Photoinduced current transient spectroscopy of defect levels in CuInSe₂ and CuGaSe₂ epitaxial and polycrystalline layers. Journal Physics D: Applied Physics, 2012, 45, 335101.	2.8	16
42	Lone conduction band in Cu2ZnSnSe4. Applied Physics Letters, 2012, 100, .	3.3	19
43	Feedback mechanism for the stability of the band gap of CuInSe<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2012, 86, .	3.2	29
44	Raman analysis of monoclinic Cu2SnS3 thin films. Applied Physics Letters, 2012, 100, .	3.3	232
45	Thin film solar cells based on the ternary compound Cu2SnS3. Thin Solid Films, 2012, 520, 6291-6294.	1.8	232
46	Temperature dependence of potential fluctuations in chalcopyrites. , 2011, , .		5
47	Defect signatures in copper gallium diselenide. , 2011, , .		2
48	Defect levels in CuGaSe2 by modulated photocurrent spectroscopy. Thin Solid Films, 2011, 519, 7308-7311.	1.8	6
49	Spatial variations of optoelectronic properties in single crystalline CuGaSe2 thin films studied by photoluminescence. Thin Solid Films, 2011, 519, 7332-7336.	1.8	10
50	Preparation of CuGaSe2 absorber layers for thin film solar cells by annealing of efficiently electrodeposited Cuâ€"Ga precursor layers from ionic liquids. Thin Solid Films, 2011, 519, 7254-7258.	1.8	15
51	Route Toward High-Efficiency Single-Phase Cu$_{f 2}$ZnSn(S,Se)$_{f 4}$ Thin-Film Solar Cells: Model Experiments and Literature Review. IEEE Journal of Photovoltaics, 2011, 1, 200-206.	2.5	91
52	MOVPE of CuGaSe2 on GaAs in the presence of a CuxSe secondary phase. Journal of Crystal Growth, 2011, 315, 82-86.	1.5	14
53	Influence of copper excess on the absorber quality of CuInSe2. Applied Physics Letters, 2011, 99, .	3.3	28
54	Defect levels in the epitaxial and polycrystalline CuGaSe2 by photocurrent and capacitance methods. Journal of Applied Physics, 2011, 110, 103711.	2.5	24

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55	Influence of secondary phase CuxSe on the optoelectronic quality of chalcopyrite thin films. Applied Physics Letters, 2011, 98, 201910.	3.3	15
56	Subgrain size inhomogeneities in the luminescence spectra of thin film chalcopyrites. Applied Physics Letters, 2010, 97, .	3.3	29
57	Non-uniformities of opto-electronic properties in Cu(In,Ga)Se2 thin films and their influence on cell performance studied with confocal photoluminescence. , 2009, , .		4
58	Local fluctuations of absorber properties of Cu(In,Ga)Se2 by sub-micron resolved PL towards â€œreal lifeâ€•conditions. Thin Solid Films, 2009, 517, 2222-2225.	1.8	38
59	Ensemble analyses by Minkowski-operations for spatially resolved structural and optoelectronic features of Cu(In,Ga)(Se2,S2) absorbers. Thin Solid Films, 2009, 517, 2427-2430.	1.8	12
60	Subwavelength inhomogeneities in Cu(In,Ga)Se2thin films revealed by near-field scanning optical microscopy. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1005-1008.	1.8	11
61	Interpretation of quasi-Fermi level splitting in Cu(Ga,In)Se2-absorbers by confocally recorded spectral luminescence and numerical modeling. Thin Solid Films, 2009, 517, 2344-2348.	1.8	7
62	Analysis of Band Gap Fluctuations in Cu(In,Ga)Se2 by Confocal Optical Transmission and Photoluminescence. Materials Research Society Symposia Proceedings, 2007, 1012, 1.	0.1	4
63	Analyses of Local Open Circuit Voltages in Polycrystalline Cu(In,Ga)Se₂ Thin Film Solar Cell Absorbers on the Micrometer Scale by Confocal Luminescence. Chimia, 2007, 61, 801-805.	0.6	8
64	Lateral features of Cu(In0.7Ga0.3)Se2-heterodiodes in the Î¼m-scale by confocal luminescence and focused light beam induced currents. Thin Solid Films, 2007, 515, 6127-6131.	1.8	10
65	Spectrally resolved photoluminescence studies on Cu(In,Ga)Se2 solar cells with lateral submicron resolution. Thin Solid Films, 2007, 515, 6212-6216.	1.8	51
66	Photoluminescence, open circuit voltage, and photocurrents in Cu(In,Ga)Se2 solar cells with lateral submicron resolution. Thin Solid Films, 2006, 511-512, 678-683.	1.8	11
67	Extraction of features from 2-d laterally sub-micron resolved photoluminescence in Cu(In,Ga)Se2 absorbers by Fourier transforms and Minkowski-operations. Thin Solid Films, 2006, 511-512, 309-315.	1.8	4
68	Lateral variations of optoelectronic quality of Cu(In1â€“xGax)Se2 in the submicron-scale. Thin Solid Films, 2005, 487, 8-13.	1.8	18
69	Structural properties and quality of the photoexcited state in Cu(In1âˆ’xGax)Se2 solar cell absorbers with lateral submicron resolution. Thin Solid Films, 2005, 480-481, 259-263.	1.8	26