

Budhika G Mendis

List of Publications by Year in descending order

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42
papers

878
citations

567281

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43
all docs

43
docs citations

43
times ranked

1387
citing authors

#	ARTICLE	IF	CITATIONS
1	Understanding the role of selenium in defect passivation for highly efficient selenium-alloyed cadmium telluride solar cells. <i>Nature Energy</i> , 2019, 4, 504-511.	39.5	145
2	The role of secondary phase precipitation on grain boundary electrical activity in Cu ₂ ZnSnS ₄ (CZTS) photovoltaic absorber layer material. <i>Journal of Applied Physics</i> , 2012, 112, .	2.5	98
3	Direct observation of Cu, Zn cation disorder in Cu ₂ ZnSnS ₄ solar cell absorber material using aberration corrected scanning transmission electron microscopy. <i>Progress in Photovoltaics: Research and Applications</i> , 2014, 22, 24-34.	8.1	78
4	Evidence for Self-healing Benign Grain Boundaries and a Highly Defective Sb ₂ Se ₃ –CdS Interfacial Layer in Sb ₂ Se ₃ Thin-Film Photovoltaics. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 21730-21738.	8.0	57
5	Simple and scalable route for the “bottom-up”™ synthesis of few-layer graphene platelets and thin films. <i>Journal of Materials Chemistry</i> , 2011, 21, 3378.	6.7	56
6	Giant dielectric permittivity of detonation-produced nanodiamond is caused by water. <i>Journal of Materials Chemistry</i> , 2012, 22, 11166.	6.7	52
7	Luminescence of Cu ₂ ZnSnS ₄ polycrystals described by the fluctuating potential model. <i>Journal of Applied Physics</i> , 2013, 113, .	2.5	45
8	Use of the Nye tensor in analyzing HREM images of bcc screw dislocations. <i>Philosophical Magazine</i> , 2006, 86, 4607-4640.	1.6	43
9	A comparative study of microstructural stability and sulphur diffusion in CdS/CdTe photovoltaic devices. <i>Solar Energy Materials and Solar Cells</i> , 2015, 141, 341-349.	6.2	33
10	An inelastic multislice simulation method incorporating plasmon energy losses. <i>Ultramicroscopy</i> , 2019, 206, 112816.	1.9	24
11	Synthesis and Properties of Hydrogen-Free Detonation Diamond. <i>Propellants, Explosives, Pyrotechnics</i> , 2015, 40, 39-45.	1.6	18
12	Nanometre-scale optical property fluctuations in Cu ₂ ZnSnS ₄ revealed by low temperature cathodoluminescence. <i>Solar Energy Materials and Solar Cells</i> , 2018, 174, 65-76.	6.2	18
13	Microscopic Analysis of Interdiffusion and Void Formation in CdTe _(1-x) Se _x and CdTe Layers. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 38070-38075.	8.0	18
14	Long Lifetime Hole Traps at Grain Boundaries in CdTe Thin-Film Photovoltaics. <i>Physical Review Letters</i> , 2015, 115, 218701.	7.8	17
15	Angular dependence of fast-electron scattering from materials. <i>Physical Review B</i> , 2020, 101, .	3.2	16
16	Optical Properties and Dielectric Functions of Grain Boundaries and Interfaces in CdTe Thin-Film Solar Cells. <i>ACS Applied Energy Materials</i> , 2019, 2, 1419-1427.	5.1	15
17	On the nature of fibres grown from nanodiamond colloids. <i>Materials Chemistry and Physics</i> , 2016, 173, 325-332.	4.0	12
18	Crystal structure and anti-site boundary defect characterisation of Cu ₂ ZnSnSe ₄ . <i>Journal of Materials Chemistry A</i> , 2018, 6, 189-197.	10.3	11

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19	Low pressure plasma assisted silicon nanowire growth from self organised tin catalyst particles. CrystEngComm, 2013, 15, 3808.	2.6	10
20	Dynamic scattering of electron vortex beams – A Bloch wave analysis. Ultramicroscopy, 2015, 149, 74-85.	1.9	10
21	The role of transition radiation in cathodoluminescence imaging and spectroscopy of thin-foils. Ultramicroscopy, 2016, 167, 31-42.	1.9	10
22	A new analytical method for characterising the bonding environment at rough interfaces in high-k gate stacks using electron energy loss spectroscopy. Ultramicroscopy, 2010, 110, 105-117.	1.9	9
23	On the electron vortex beam wavefunction within a crystal. Ultramicroscopy, 2015, 157, 1-11.	1.9	9
24	Characterising the surface and interior chemistry of core-shell nanoparticles using scanning transmission electron microscopy. Ultramicroscopy, 2011, 111, 212-226.	1.9	7
25	Theory underpinning multislice simulations with plasmon energy losses. Microscopy (Oxford,) Tj ETQq1 1 0.784314 rrgBT /Overlock 10 T 1.5	1.9	7
26	Quantum theory of magnon excitation by high energy electron beams. Ultramicroscopy, 2022, 239, 113548.	1.9	7
27	Plasmon-loss imaging of polymer-methanofullerene bulk heterojunction solar cells. Applied Physics Letters, 2013, 102, .	3.3	6
28	Planck's generalised radiation law and its implications for cathodoluminescence spectra. Ultramicroscopy, 2019, 204, 73-80.	1.9	6
29	Evolution of the premartensitic state in the NiAl phase of a NiCoCrAlY bond coat during thermal cycling. Philosophical Magazine, 2007, 87, 4229-4251.	1.6	5
30	A semi-classical theory of magnetic inelastic scattering in transmission electron energy loss spectroscopy. Ultramicroscopy, 2021, 230, 113390.	1.9	5
31	Electron beam-specimen interactions and their effect on high-angle annular dark-field imaging of dopant atoms within a crystal. Acta Crystallographica Section A: Foundations and Advances, 2010, 66, 407-420.	0.3	4
32	Examining charge transport networks in organic bulk heterojunction photovoltaic diodes using 1/f noise spectroscopy. Journal of Materials Chemistry C, 2015, 3, 6077-6085.	5.5	4
33	Fixation of atmospheric nitrogen by nanodiamonds. New Journal of Chemistry, 2018, 42, 11160-11164.	2.8	4
34	Removal of core hole distortion from ionization edges in electron energy loss spectroscopy. Physical Review B, 2021, 103, .	3.2	4
35	Prospects for electron microscopy characterisation of solar cells: Opportunities and challenges. Ultramicroscopy, 2012, 119, 82-96.	1.9	3
36	The effects of substrate self-biasing on the growth of Sn-catalysed silicon nanowires grown at low pressure. Journal of Materials Science, 2014, 49, 2078-2084.	3.7	3

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37	Inelastic Scattering in Electron Backscatter Diffraction and Electron Channeling Contrast Imaging. <i>Microscopy and Microanalysis</i> , 2020, 26, 1147-1157.	0.4	3
38	Fully depleted emitter layers: a novel method to improve band alignment in thin-film solar cells. <i>Semiconductor Science and Technology</i> , 2019, 34, 055008.	2.0	2
39	Corrigendum to: "An inelastic multislice simulation method incorporating plasmon energy losses" [Ultramicroscopy 206 (2019) 112816]. <i>Ultramicroscopy</i> , 2020, 212, 112957.	1.9	1
40	Differing Impacts of Blended Fullerene Acceptors on the Performance of Ternary Organic Solar Cells. <i>ACS Applied Energy Materials</i> , 2021, 4, 10867-10876.	5.1	1
41	HREM imaging of screw dislocation core structures in bcc metals. <i>Materials Research Society Symposia Proceedings</i> , 2004, 839, 42.	0.1	0
42	Surface Core Hole Electron Energy-Loss Fine Structure in MgO: Experiment and Theory. <i>Microscopy and Microanalysis</i> , 0, , 1-12.	0.4	0