# Imyhamy M Dharmadasa

List of Publications by Year
in descending order



| 104 | 2,907 | 136740 | 197535 |
|---|---|---|---|
| papers | citations | 32 h-index | 49 g-index |

| 107 | 107 | 107 | 2075 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Strengths and Advantages of Electrodeposition as a Semiconductor Growth Technique for Applications in Macroelectronic Devices. Journal of the Electrochemical Society, 2006, 153, G47. | 1.3 | 138 |
| 2 | Growth and characterisation of electrodeposited ZnO thin films. Thin Solid Films, 2008, 516, 3893-3898. | 0.8 | 133 |
| 3 | Review of the CdCl2 Treatment Used in CdS/CdTe Thin Film Solar Cell Development and New Evidence towards Improved Understanding. Coatings, 2014, 4, 282-307. | 1.2 | 126 |
| 4 | Fabrication of CdS/CdTe-Based Thin Film Solar Cells Using an Electrochemical Technique. Coatings, 2014, 4, 380-415. | 1.2 | 96 |
| 5 | Effects of surface treatments on Schottky barrier formation at metal/nâ€type CdTe contacts. Applied Physics Letters, 1989, 54, 137-139. | 1.5 | 80 |
| 6 | Electrodeposition of pâ€“iâ€“n type CuInSe2 multilayers for photovoltaic applications. Solar Energy Materials and Solar Cells, 2004, 81, 125-133. | 3.0 | 80 |
| 7 | New ways of developing glass/conducting glass/CdS/CdTe/metal thin-film solar cells based on a new model. Semiconductor Science and Technology, 2002, 17, 1238-1248. | 1.0 | 72 |
| 8 | Third generation multi-layer tandem solar cells for achieving high conversion efficiencies. Solar Energy Materials and Solar Cells, 2005, 85, 293-300. | 3.0 | 70 |
| 9 | 15.3% efficient graded bandgap solar cells fabricated using electroplated CdS and CdTe thin films. Solar Energy, 2016, 136, 10-14. | 2.9 | 69 |
| 10 | Recent developments and progress on electrical contacts to CdTe, CdS and ZnSe with special reference to BARRIER contacts to CdTe. Progress in Crystal Growth and Characterization of Materials, 1998, 36, 249-290. | 1.8 | 64 |
| 11 | Correlation of photoluminescence measurements with the composition and electronic properties of chemically etched CdTe surfaces. Applied Physics Letters, 1988, 53, 2623-2625. | 1.5 | 62 |
| 12 | Investigation of electronic quality of chemical bath deposited cadmium sulphide layers used in thin film photovoltaic solar cells. Thin Solid Films, 2003, 437, 10-17. | 0.8 | 61 |
| 13 | Graded-Bandgap Solar Cells Using All-Electrodeposited ZnS, CdS and CdTe Thin-Films. Energies, 2015, 8, 4416-4435. | 1.6 | 60 |
| 14 | Electrodeposition of CuInSe2 layers using a two-electrode system for applications in multi-layer graded bandgap solar cells. Solar Energy Materials and Solar Cells, 2006, 90, 2191-2200. | 3.0 | 59 |
| 15 | Improvement of composition of CdTe thin films during heat treatment in the presence of CdCl2. Journal of Materials Science: Materials in Electronics, 2017, 28, 2343-2352. | 1.1 | 59 |
| 16 | High short-circuit current density CdTe solar cells using all-electrodeposited semiconductors. Thin Solid Films, 2014, 556, 529-534. | 0.8 | 58 |
| 17 | Investigation of n-type Cu2O layers prepared by a low cost chemical method for use in photo-voltaic thin film solar cells. Renewable Energy, 2002, 26, 521-529. | 4.3 | 57 |
| 18 | Electrodeposition of CdTe thin films using nitrate precursor for applications in solar cells. Journal of Materials Science: Materials in Electronics, 2015, 26, 3119-3128. | 1.1 | 57 |

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| 19 | Growth and characterisation of n- and p-type ZnTe thin films for applications in electronic devices. Current Applied Physics, 2016, 16, 120-130. | 1.1 | 56 |
| 20 | Electrodeposition of p+, p, i, n and n+-type copper indium gallium diselenide for development of multilayer thin film solar cells. Thin Solid Films, 2005, 472, 212-216. | 0.8 | 53 |
| 21 | Development of CdSe thin films for application in electronic devices. Journal of Materials Science: Materials in Electronics, 2015, 26, 1066-1076. | 1.1 | 51 |
| 22 | The effects of inclusion of iodine in CdTe thin films on material properties and solar cell performance. Solar Energy Materials and Solar Cells, 2003, 77, 303-317. | 3.0 | 45 |
| 23 | Effects of multi-defects at metal/semiconductor interfaces on electrical properties and their influence on stability and lifetime of thin film solar cells. Solar Energy Materials and Solar Cells, 2005, 86, 373-384. | 3.0 | 41 |
| 24 | Optimisation of CdTe electrodeposition voltage for development of CdS/CdTe solar cells. Journal of Materials Science: Materials in Electronics, 2016, 27, 12464-12472. | 1.1 | 41 |
| 25 | Next Generation Solar Cells Based on Graded Bandgap Device Structures Utilising Rod-Type Nano-Materials. Energies, 2015, 8, 5440-5458. | 1.6 | 39 |
| 26 | Title is missing!. Journal of Materials Science: Materials in Electronics, 1998, 9, 231-235. | 1.1 | 38 |
| 27 | Development of p[sup +], p, i, n, and n[sup +]-Type CuInGaSe[sub 2] Layers for Applications in Graded Bandgap Multilayer Thin-Film Solar Cells. Journal of the Electrochemical Society, 2007, 154, H466. | 1.3 | 38 |
| 28 | Fermi level pinning and effects on CuInGaSe<sub>2</sub>-based thin-film solar cells. Semiconductor Science and Technology, 2009, 24, 055016. | 1.0 | 38 |
| 29 | Growth of CdS Layers to Develop All-Electrodeposited CdS/CdTe Thin-Film Solar Cells. Journal of the Electrochemical Society, 2010, 157, H647. | 1.3 | 37 |
| 30 | Electro-Plating and Characterisation of CdTe Thin Films Using CdCl2 as the Cadmium Source. Energies, 2015, 8, 10883-10903. | 1.6 | 37 |
| 31 | Unravelling complex nature of CdS/CdTe based thin film solar cells. Journal of Materials Science: Materials in Electronics, 2017, 28, 16598-16617. | 1.1 | 36 |
| 32 | Electro-plating and characterisation of cadmium sulphide thin films using ammonium thiosulphate as the sulphur source. Journal of Materials Science: Materials in Electronics, 2015, 26, 2418-2429. | 1.1 | 35 |
| 33 | Electrochemical Deposition of CdTe Semiconductor Thin Films for Solar Cell Application Using Two-Electrode and Three-Electrode Configurations: A Comparative Study. Advances in Materials Science and Engineering, 2016, 2016, 1-8. | 1.0 | 32 |
| 34 | Characterization of n-Type and p-Type ZnS Thin Layers Grown by an Electrochemical Method. Journal of Electronic Materials, 2013, 42, 692-700. | 1.0 | 31 |
| 35 | Analysis of electrodeposited CdTe thin films grown using cadmium chloride precursor for applications in solar cells. Journal of Materials Science: Materials in Electronics, 2017, 28, 14110-14120. | 1.1 | 31 |
| 36 | Effects of CdCl2 treatment on deep levels in CdTe and their implications on thin film solar cells: a comprehensive photoluminescence study. Journal of Materials Science: Materials in Electronics, 2015, 26, 4571-4583. | 1.1 | 30 |

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| 37 | Scientific complications and controversies noted in the field of CdS/CdTe thin film solar cells and the way forward for further development. Journal of Materials Science: Materials in Electronics, 2019, 30, 20330-20344. | 1.1 | 29 |
| 38 | Experimental study of graded bandgap Cu(InGa)(SeS)2 thin films grown on glass/molybdenum substrates by selenization and sulphidation. Solar Energy Materials and Solar Cells, 2004, 82, 587-587. | 3.0 | 28 |
| 39 | Development of ZnTe layers using an electrochemical technique for applications in thin-film solar cells. Semiconductor Science and Technology, 2013, 28, 045005. | 1.0 | 27 |
| 40 | Metals on cadmium telluride: Schottky barriers and interface reactions. Applied Physics Letters, 1986, 48, 1802-1804. | 1.5 | 26 |
| 41 | Chemical etching of Cu(In,Ga)Se2 layers for fabrication of electronic devices. Solar Energy Materials and Solar Cells, 2003, 77, 331-339. | 3.0 | 26 |
| 42 | Intense Pulsed Light Sintering of Electrodeposited CdS Thin Films. Advanced Engineering Materials, 2014, 16, 1351-1361. | 1.6 | 26 |
| 43 | Electrodeposition and characterisation of CdS thin films using thiourea precursor for application in solar cells. Journal of Materials Science: Materials in Electronics, 2016, 27, 6786-6799. | 1.1 | 25 |
| 44 | Perovskite solar cells: a deep analysis using currentâ€“voltage and capacitanceâ€“voltage techniques. Journal of Materials Science: Materials in Electronics, 2019, 30, 1227-1235. | 1.1 | 25 |
| 45 | Latest developments in CdTe, CuInGaSe2 and GaAs/AlGaAs thin film PV solar cells. Current Applied Physics, 2009, 9, e2-e6. | 1.1 | 24 |
| 46 | Investigating the electronic properties of multi-junction ZnS/CdS/CdTe graded bandgap solar cells. Materials Chemistry and Physics, 2017, 191, 145-150. | 2.0 | 24 |
| 47 | Effect of thickness: a case study of electrodeposited CdS in CdS/CdTe based photovoltaic devices. Journal of Materials Science: Materials in Electronics, 2017, 28, 3254-3263. | 1.1 | 22 |
| 48 | Perovskite solar cells: short lifetime and hysteresis behaviour of currentâ€“voltage characteristics. Journal of Materials Science: Materials in Electronics, 2019, 30, 12851-12859. | 1.1 | 22 |
| 49 | The effects of anode material type on the optoelectronic properties of electroplated CdTe thin films and the implications for photovoltaic application. Journal of Physics and Chemistry of Solids, 2018, 114, 100-108. | 1.9 | 21 |
| 50 | Electrodeposition of CdS thin-films from cadmium acetate and ammonium thiosulphate precursors. Journal of Materials Science: Materials in Electronics, 2019, 30, 4580-4589. | 1.1 | 21 |
| 51 | The effect on CdS/CdTe solar cell conversion efficiency of the presence of fluorine in the usual CdCl2 treatment of CdTe. Materials Chemistry and Physics, 2015, 157, 39-44. | 2.0 | 20 |
| 52 | Title is missing!. Journal of Materials Science: Materials in Electronics, 1999, 10, 441-445. | 1.1 | 18 |
| 53 | Next Generation Multilayer Graded Bandgap Solar Cells. , 2019, , . | | 18 |
| 54 | Application of glow discharge optical emission spectroscopy to study semiconductors and semiconductor devices. Semiconductor Science and Technology, 1995, 10, 369-372. | 1.0 | 17 |

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| 55 | Effects of Thickness and Annealing on Optoelectronic Properties of Electrodeposited ZnS Thin Films for Photonic Device Applications. Journal of Electronic Materials, 2014, 43, 791-801. | 1.0 | 17 |
| 56 | Structural, optical and electrical properties of SnO2:F thin films deposited by spray pyrolysis for application in thin film solar cells. Journal of Materials Science: Materials in Electronics, 2016, 27, 12280-12286. | 1.1 | 17 |
| 57 | Solar Cells Active in Complete Darkness. Journal of Physics: Conference Series, 2011, 286, 012041. | 0.3 | 16 |
| 58 | Investigation of electronic quality of electrodeposited cadmium sulphide layers from thiourea precursor for use in large area electronics. Materials Chemistry and Physics, 2016, 180, 14-28. | 2.0 | 16 |
| 59 | Effect of stirring rate of electrolyte on properties of electrodeposited CdS layers. Journal of Materials Science: Materials in Electronics, 2016, 27, 5415-5421. | 1.1 | 15 |
| 60 | Title is missing!. Journal of Materials Science: Materials in Electronics, 1998, 9, 289-290. | 1.1 | 14 |
| 61 | Investigating the effect of GaCl 3 incorporation into the usual CdCl 2 treatment on CdTe-based solar cell device structures. Current Applied Physics, 2017, 17, 279-289. | 1.1 | 14 |
| 62 | Development of Polyaniline Using Electrochemical Technique for Plugging Pinholes in Cadmium Sulfide/Cadmium Telluride Solar Cells. Journal of Electronic Materials, 2014, 43, 4003-4010. | 1.0 | 13 |
| 63 | An investigation of the influence of different transparent conducting oxide substrates/front contacts on the performance of CdS/CdTe thin-film solar cells. Journal of Materials Science: Materials in Electronics, 2017, 28, 18865-18872. | 1.1 | 13 |
| 64 | Factors Affecting Electroplated Semiconductor Material Properties: The Case Study of Deposition Temperature on Cadmium Telluride. Coatings, 2019, 9, 370. | 1.2 | 13 |
| 65 | Preparation of indium selenide thin film by electrochemical technique. Journal of Materials Science: Materials in Electronics, 2014, 25, 3977-3983. | 1.1 | 12 |
| 66 | Development of opto-electronic devices using electrochemically grown thin ZnSe layers. Journal of Materials Science: Materials in Electronics, 2001, 12, 661-666. | 1.1 | 11 |
| 67 | The Effect of Fluorine Doping on the Characteristic Behaviour of CdTe. Journal of Electronic Materials, 2016, 45, 5728-5738. | 1.0 | 11 |
| 68 | Ultrafast charge carrier relaxation and charge transfer processes in CdS/CdTe thin films. Physical Chemistry Chemical Physics, 2015, 17, 16760-16766. | 1.3 | 10 |
| 69 | Effects of deposition time and post-deposition annealing on the physical and chemical properties of electrodeposited CdS thin films for solar cell application. Journal of Materials Science: Materials in Electronics, 2016, 27, 10180-10191. | 1.1 | 10 |
| 70 | Effect of the inclusion of galium in normal cadmium chloride treatment on electrical properties OF CdS/CdTe solar cell. Materials Chemistry and Physics, 2017, 196, 229-236. | 2.0 | 10 |
| 71 | Analysis of the electronic properties of all-electroplated ZnS, CdS and CdTe graded bandgap photovoltaic device configuration. Solar Energy, 2017, 158, 721-727. | 2.9 | 10 |
| 72 | Effective harvesting of photons for improvement of solar energy conversion by graded bandgap multilayer solar cells. Journal of the National Science Foundation of Sri Lanka, 2013, 41, 73. | 0.1 | 10 |

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|---|---|---|---|
| 73 | One-sided rectifying pâ€“n junction diodes fabricated from n-CdS and p-ZnTe:Te semiconductors. Materials Research Express, 2016, 3, 095904. | 0.8 | 9 |
| 74 | An investigation into the effect of rate of stirring of bath electrolyte on the properties of electrodeposited CdTe thin film semiconductors. Journal of Materials Science: Materials in Electronics, 2018, 29, 6236-6244. | 1.1 | 9 |
| 75 | Magnesium Incorporation in n-CdTe to Produce Wide Bandgap p-Type CdTe:Mg Window Layers. ChemEngineering, 2018, 2, 59. | 1.0 | 9 |
| 76 | Study of Fermi level position before and after CdCl2 treatment of CdTe thin films using ultraviolet photoelectron spectroscopy. Journal of Materials Science: Materials in Electronics, 2016, 27, 5039-5046. | 1.1 | 8 |
| 77 | Electrochemical deposition of CuInTe2 layers for applications in thin film solar cells. Journal of Materials Science: Materials in Electronics, 2010, 21, 373-379. | 1.1 | 7 |
| 78 | Processing of CdTe thin films by intense pulsed light in the presence of CdCl2. Journal of Coatings Technology Research, 2015, 12, 835-842. | 1.2 | 7 |
| 79 | Electrodeposition and characterization of as-deposited and annealed CdTe thin films. Ceylon Journal of Science, 2016, 45, 53. | 0.1 | 7 |
| 80 | Effects of defects in semiconductors on reproducibility and performance of thin-film photovoltaic solar cells. Semiconductor Science and Technology, 2008, 23, 035023. | 1.0 | 6 |
| 81 | Optimisation of pH of cadmium chloride post-growth-treatment in processing CDS/CDTE based thin film solar cells. Journal of Materials Science: Materials in Electronics, 2017, 28, 7231-7242. | 1.1 | 6 |
| 82 | Progress in development of graded bandgap thin film solar cells with electroplated materials. Journal of Materials Science: Materials in Electronics, 2017, 28, 6359-6365. | 1.1 | 6 |
| 83 | Optimisation of pH of the CdCl2â€¯+â€¯Ga2(SO4)3 activation step of CdS/CdTe based Thin-Film solar cells. Solar Energy, 2018, 170, 398-405. | 2.9 | 6 |
| 84 | The influence of ZnS crystallinity on all-electroplated ZnS/CdS/CdTe graded bandgap device properties. Journal of Materials Science: Materials in Electronics, 2018, 29, 13631-13642. | 1.1 | 6 |
| 85 | Influence of chemical etching on metal contacts to II-VI compounds: CdTe and ZnSe. International Journal of Electronics, 1994, 76, 961-967. | 0.9 | 5 |
| 86 | Multi Fermi level pinning at metal/Cu(InGa)(SeS)2 interfaces. Solar Energy Materials and Solar Cells, 2008, 92, 923-928. | 3.0 | 5 |
| 87 | Effect of Gallium Doping on the Characteristic Properties of Polycrystalline Cadmium Telluride Thin Film. Journal of Electronic Materials, 2017, 46, 5127-5135. | 1.0 | 5 |
| 88 | Ga doping of nanocrystalline CdS thin films by electrodeposition method for solar cell application: the influence of dopant precursor concentration. Journal of Materials Science: Materials in Electronics, 2019, 30, 4977-4989. | 1.1 | 5 |
| 89 | Necessity and relevance of precipitate free clear electrolytes for electrodeposition of CdS semiconductor materials with enhanced photovoltaic properties. Journal of Materials Science: Materials in Electronics, 2017, 28, 18592-18602. | 1.1 | 4 |
| 90 | Development of CdMnTe thin films using electroplating technique for opto-electronic device applications. Journal of Materials Science: Materials in Electronics, 2020, 31, 22151-22161. | 1.1 | 4 |

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| 91 | Electrodeposition of ternary compounds for novel PV application and optimisation of electrodeposited CdMnTe thin-films. Scientific Reports, 2020, 10, 21445. | 1.6 | 3 |
| 92 | Electrodeposition of Electronic Materials for Applications in Macroelectronic- and Nanotechnology-Based Devices. , 2014, , 680-691. | | 3 |
| 93 | STRUCTURAL AND ELECTRICAL STABILITY OF METAL CONTACTS TO MBE GROWN CdTe LAYERS. Surface Review and Letters, 1994, 01, 669-672. | 0.5 | 2 |
| 94 | CdTe Deposition and Characterisation. , 2019, , 123-183. | | 2 |
| 95 | Reply to Comment on ÂNew ways of developing glass/conducting glass/CdS/CdTe/metal thin-film solar cells based on a new modelÂ, by Dharmadasaet al2002Semicond. Sci. Technol.17 1238â€“48. Semiconductor Science and Technology, 2003, 18, 813-816. | 1.0 | 1 |
| 96 | Fluorine-induced improvement of structural and optical properties of CdTe thin films for solar cell efficiency enhancement. Journal of Materials Science: Materials in Electronics, 2017, 28, 14615-14630. | 1.1 | 1 |
| 97 | Photovoltaic Solar Cells: Materials, Concepts and Devices. , 2019, , 17-40. | | 1 |
| 98 | Photovoltaic Solar Energy Conversion. , 2018, , 1-26. | | 1 |
| 99 | Forward for special issue of the Solar Asia-2015 conference: selected papers. Journal of Materials Science: Materials in Electronics, 2016, 27, 12279-12279. | 1.1 | 0 |
| 100 | Effect of Iodine Incorporation on Characteristic Properties of Cadmium Telluride Deposited in Aqueous Solution. Journal of Electronic Materials, 2018, 47, 6909-6917. | 1.0 | 0 |
| 101 | Introduction to Photovoltaics. , 2019, , 1-15. | | 0 |
| 102 | Techniques Utilised in Materials Growth and Materials and Device Characterisation. , 2019, , 41-73. | | 0 |
| 103 | Solar Cell Fabrication and Characterisation. , 2019, , 185-241. | | 0 |
| 104 | Conclusions, Challenges Encountered and Future Work. , 2019, , 243-246. | | 0 |