

# Prakash Koirala

## List of Publications by Year in descending order

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37  
papers

571  
citations

759233

12  
h-index

610901

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g-index

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docs citations

38  
times ranked

793  
citing authors

#	ARTICLE	IF	CITATIONS
1	Reduced Recombination and Improved Performance of CdSe/CdTe Solar Cells due to Cu Migration Induced by Light Soaking. ACS Applied Materials & Interfaces, 2022, 14, 19644-19651.	8.0	12
2	Impact of lifetime on the levelized cost of electricity from perovskite single junction and tandem solar cells. Sustainable Energy and Fuels, 2022, 6, 2718-2726.	4.9	11
3	The impact of processing on the optical absorption onset of CdTe thin-films and solar cells. Journal of Applied Physics, 2021, 129, .	2.5	3
4	Optical Properties of Magnesium-Zinc Oxide for Thin Film Photovoltaics. Materials, 2021, 14, 5649.	2.9	3
5	Glancing angle deposited CdTe: Nanostructured films and impact on solar cell performance. Surface and Coatings Technology, 2020, 381, 125127.	4.8	6
6	Irradiance and temperature considerations in the design and deployment of high annual energy yield perovskite/CIGS tandems. Sustainable Energy and Fuels, 2019, 3, 1841-1851.	4.9	30
7	Optical simulation of external quantum efficiency spectra of CuIn <sub>1-x</sub> Ga <sub>x</sub> Se <sub>2</sub> solar cells from spectroscopic ellipsometry inputs. Journal of Energy Chemistry, 2018, 27, 1151-1169.	12.9	10
8	A Versatile Optical Model Applied to CdTe and CdSe <sub>1-x</sub> Te <sub>x</sub> Alloys: Sensitivity to Film Composition and Relative Defect Density. , 2018, , .		1
9	Real Time and Mapping Spectroscopic Ellipsometry for CdTe Photovoltaics. Springer Series in Optical Sciences, 2018, , 357-413.	0.7	1
10	Optical Simulation of External Quantum Efficiency Spectra. Springer Series in Optical Sciences, 2018, , 83-138.	0.7	1
11	Glancing Angle Deposited CdTe: Optical Properties and Structure. , 2018, , .		1
12	Optical Hall Effect of PV Device Materials. IEEE Journal of Photovoltaics, 2018, 8, 1793-1799.	2.5	12
13	Real Time Spectroscopic Ellipsometry Analysis of First Stage CuIn <sub>1-x</sub> Ga <sub>x</sub> Se <sub>2</sub> Growth: Indium-Gallium Selenide Co-Evaporation. Materials, 2018, 11, 145.	2.9	3
14	Optical design of perovskite solar cells for applications in monolithic tandem configuration with CuInSe <sub>2</sub> bottom cells. MRS Advances, 2018, 3, 3111-3119.	0.9	13
15	Identification of Defect Levels in Copper Indium Diselenide (CuInSe <sub>2</sub> ) Thin Films via Photoluminescence Studies. MRS Advances, 2018, 3, 3135-3141.	0.9	5
16	Employing Overlayers To Improve the Performance of Cu <sub>2</sub> BaSnS <sub>4</sub> Thin Film based Photoelectrochemical Water Reduction Devices. Chemistry of Materials, 2017, 29, 916-920.	6.7	61
17	Spectroscopic ellipsometry for analysis of polycrystalline thin-film photovoltaic devices and prediction of external quantum efficiency. Applied Surface Science, 2017, 421, 601-607.	6.1	19
18	Oxygenated CdS Buffer Layers Enabling High Open-Circuit Voltages in Earth-Abundant Cu <sub>2</sub> BaSnS <sub>4</sub> Thin-Film Solar Cells. Advanced Energy Materials, 2017, 7, 1601803.	19.5	102

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19	Application of Mapping Spectroscopic Ellipsometry for CdSe/CdTe Solar Cells: Optimization of Low-Temperature Processed Devices with All-Sputtered Semiconductors. , 2017, , .		0
20	Parameterized complex dielectric functions of $\text{CuIn}_{1-x}\text{Ga}_x\text{Se}_2$ : applications in optical characterization of compositional non-uniformities and depth profiles in materials and solar cells. Progress in Photovoltaics: Research and Applications, 2016, 24, 1200-1213.	8.1	34
21	Measuring relative carrier concentrations at the nanoscale using scanning microwave impedance microscopy: The case of CdTe solar cells. , 2016, , .		0
22	Direct Observation of $\text{CdCl}_2$ Treatment Induced Grain Boundary Carrier Depletion in CdTe Solar Cells Using Scanning Probe Microwave Reflectivity Based Capacitance Measurements. Journal of Physical Chemistry C, 2016, 120, 7020-7024.	3.1	45
23	Low temperature photoluminescence spectroscopy studies on sputter deposited CdS/CdTe junctions and solar cells. Journal of Materials Research, 2016, 31, 186-194.	2.6	6
24	Through-the-glass spectroscopic ellipsometry for analysis of CdTe thin-film solar cells in the superstrate configuration. Progress in Photovoltaics: Research and Applications, 2016, 24, 1055-1067.	8.1	54
25	Effect of molybdenum deposition temperature on the performance of $\text{CuIn}_{1-x}\text{Ga}_x\text{Se}_2$ Solar Cells. , 2015, , .		0
26	Direct observation of electrical properties of grain boundaries in sputter-deposited CdTe using scan-probe microwave reflectivity based capacitance measurements. Applied Physics Letters, 2015, 107, .	3.3	19
27	Through-the-glass spectroscopic ellipsometry for simultaneous mapping of coating properties and stress in the glass. , 2015, , .		0
28	Models for low energy electron beam induced current experiments in polycrystalline thin film photovoltaics. , 2015, , .		1
29	Enhancing the efficiency of CdTe solar cells using a nanocrystalline iron pyrite film as an interface layer. , 2015, , .		4
30	Spectroscopic Ellipsometry Applied in the Full p-i-n a-Si:H Solar Cell Device Configuration. IEEE Journal of Photovoltaics, 2015, 5, 307-312.	2.5	11
31	Electron beam induced current in the high injection regime. Nanotechnology, 2015, 26, 295401.	2.6	7
32	Transition metal nitride contacts for CdTe photovoltaics. , 2014, , .		2
33	Real time spectroscopic ellipsometry for analysis and control of thin film polycrystalline semiconductor deposition in photovoltaics. Thin Solid Films, 2014, 571, 442-446.	1.8	23
34	Nitrogen doped chalcopyrites as contacts to CdTe photovoltaics. , 2014, , .		0
35	Adsorption-controlled growth of $\text{BiVO}_4$ by molecular-beam epitaxy. APL Materials, 2013, 1, .	5.1	65
36	Nitrogen doped chalcopyrites as contacts to CdTe photovoltaics. , 2013, , .		1

#	ARTICLE	IF	CITATIONS
37	Multichannel spectroscopic ellipsometry for CdTe Photovoltaics: From real-time monitoring to large-scale mapping. , 2013, , .		0