

# Bruce M Clemens

## List of Publications by Year in descending order

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53  
papers

1,109  
citations

516561

16  
h-index

395590

33  
g-index

55  
all docs

55  
docs citations

55  
times ranked

2146  
citing authors

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 1  | Understanding Degradation Mechanisms in SrIrO <sub>3</sub> Oxygen Evolution Electrocatalysts: Chemical and Structural Microscopy at the Nanoscale. <i>Advanced Functional Materials</i> , 2021, 31, 2101542. | 7.8  | 16        |
| 2  | In Situ X-Ray Absorption Spectroscopy Disentangles the Roles of Copper and Silver in a Bimetallic Catalyst for the Oxygen Reduction Reaction. <i>Chemistry of Materials</i> , 2020, 32, 1819-1827.           | 3.2  | 30        |
| 3  | Hydrogen Storage: Hydrogen Flux through Size Selected Pd Nanoparticles into Underlying Mg Nanofilms ( <i>Adv. Energy Mater.</i> 4/2018). <i>Advanced Energy Materials</i> , 2018, 8, 1870016.                | 10.2 | 1         |
| 4  | Photoelectrochemical Water Oxidation by GaAs Nanowire Arrays Protected with Atomic Layer Deposited NiO x Electrocatalysts. <i>Journal of Electronic Materials</i> , 2018, 47, 932-937.                       | 1.0  | 6         |
| 5  | Hydrogen Flux through Size Selected Pd Nanoparticles into Underlying Mg Nanofilms. <i>Advanced Energy Materials</i> , 2018, 8, 1701326.  | 10.2 | 26        |
| 6  | Threshold Fluence Measurement for Laser Liftoff of InP Thin Films by Selective Absorption. <i>Advanced Engineering Materials</i> , 2018, 20, 1700624.  | 1.6  | 4         |
| 7  | Copper Silver Thin Films with Metastable Miscibility for Oxygen Reduction Electrocatalysis in Alkaline Electrolytes. <i>ACS Applied Energy Materials</i> , 2018, 1, 1990-1999.                               | 2.5  | 40        |
| 8  | Copper interstitial recombination centers in $Cu_{1-x}Ni_x$ . <i>Physical Review B</i> , 2018, 97, .   | 1.3  | 18        |
| 9  | Crystallinity, Surface Morphology, and Photoelectrochemical Effects in Conical InP and InN Nanowires Grown on Silicon. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 21454-21464.                 | 4.0  | 8         |
| 10 | Hydrogenation of Mg nanofilms catalyzed by size-selected Pd nanoparticles: Observation of localized MgH <sub>2</sub> nanodomains. <i>Journal of Catalysis</i> , 2016, 337, 14-25.                            | 3.1  | 13        |
| 11 | Deep recombination centers in $Cu_{1-x}Zn_xSn_x$ revealed by screened-exchange hybrid density functional theory. <i>Physical Review B</i> , 2015, 92, .  | 1.1  | 34        |
| 12 | Laser liftoff of gallium arsenide thin films. <i>MRS Communications</i> , 2015, 5, 1-5.  | 0.8  | 30        |
| 13 | Nanometer-scale hydrogen portals™ for the control of magnesium hydride formation. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 28977-28984.  | 1.3  | 14        |
| 14 | Modeling the Performance of Biaxially-Textured Silicon Solar Cells. <i>Materials Research Society Symposia Proceedings</i> , 2014, 1670, 36.   | 0.1  | 0         |
| 15 | Adventures with a Flipped Classroom and a Materials Science and Engineering MOOC : œFools Go Where Angels Fear to Treadœ. <i>Materials Research Society Symposia Proceedings</i> , 2013, 1583, 1.            | 0.1  | 5         |
| 16 | Amorphous thin film TaWSiC as a diffusion barrier for copper interconnects. <i>Applied Physics Letters</i> , 2013, 103, .  | 1.5  | 11        |
| 17 | Rapid liftoff of epitaxial thin films. <i>Journal of Materials Research</i> , 2013, 28, 2564-2569.   | 1.2  | 3         |
| 18 | Interfacial Alloy Hydride Destabilization in $Mg_{1-x}Pd_x$ Thin Films. <i>Physical Review Letters</i> , 2012, 108, 106102.  | 2.9  | 43        |

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|----|--|------|-----------|
| 19 | Mn <sub>3</sub> O <sub>4</sub> Supported on Glassy Carbon: An Active Non-Precious Metal Catalyst for the Oxygen Reduction Reaction. ACS Catalysis, 2012, 2, 2687-2694.   | 5.5  | 192       |
| 20 | Nucleation-Controlled Growth of Nanoparticles by Atomic Layer Deposition. Chemistry of Materials, 2012, 24, 4051-4059.   | 3.2  | 57        |
| 21 | Understanding the role of grain boundaries in sulfide thin film solar cells with scanning probe microscopy. , 2012, , .  |      | 1         |
| 22 | Theory and Experiments of the Impact of Work-Function Variability on Threshold Voltage Variability in MOS Devices. IEEE Transactions on Electron Devices, 2012, 59, 3124-3126.   | 1.6  | 3         |
| 23 | Investigating the Role of Grain Boundaries in CZTS and CZTSSe Thin Film Solar Cells with Scanning Probe Microscopy. Advanced Materials, 2012, 24, 720-723.   | 11.1 | 282       |
| 24 | The Role of Nucleation Surfaces in the Texture Development of Magnesium Oxide During Ion Beam Assisted Deposition. IEEE Transactions on Applied Superconductivity, 2011, 21, 2904-2907.  | 1.1  | 7         |
| 25 | Biaxial Texturing of Inorganic Photovoltaic Thin Films Using Low Energy Ion Beam Irradiation During Growth. Materials Research Society Symposia Proceedings, 2010, 1245, 1.  | 0.1  | 4         |
| 26 | Optimization of Ion Assist Beam Deposition of Magnesium Oxide Template Films During Initial Nucleation and Growth. Materials Research Society Symposia Proceedings, 2010, 1254, 510.   | 0.1  | 1         |
| 27 | Development and characterization of high temperature stable Ta-W-Si-C amorphous metal gates. Applied Physics Letters, 2010, 97, 223505.  | 1.5  | 20        |
| 28 | Bilayer metal gate electrodes with tunable work function: Mechanism and proposed model. Journal of Applied Physics, 2010, 107, .   | 1.1  | 19        |
| 29 | Fundamental Aspects of Ion Beam Assisted Deposition of Magnesium Oxide Template Films. IEEE Transactions on Applied Superconductivity, 2009, 19, 3311-3314.  | 1.1  | 12        |
| 30 | Ion-beam Texturing at Nucleation – Manipulation of Crystallographic Orientation in Cubic Materials at the Nanometer Scale. Materials Research Society Symposia Proceedings, 2009, 1181, 66.                                    | 0.1  | 1         |
| 31 | Investigation of Early Nucleation Events in Magnesium Oxide During Ion Beam Assisted Deposition. Materials Research Society Symposia Proceedings, 2008, 1150, 1.   | 0.1  | 2         |
| 32 | – Migration energy – for impurity diffusion in crystalline solids: A closer look. Journal of Applied Physics, 2004, 96, 7095-7107.   | 1.1  | 10        |
| 33 | The Strain-Assisted Nucleation and Growth Behavior of Co Islands: An Indirect Study of Nanopatterning Using the Remanent Magnetization Measurement ( $M_r$ ). Materials Research Society Symposia Proceedings, 2004, 818, 281. | 0.1  | 0         |
| 34 | The Role of Metal Catalyst in Near Ambient Hydrogen Adsorption on Multi-walled Carbon Nanotubes. Materials Research Society Symposia Proceedings, 2004, 837, 51.   | 0.1  | 2         |
| 35 | Effect of composition on vacancy mediated diffusion in random binary alloys: First principles study of the Si <sub>1-x</sub> Gex system. Journal of Applied Physics, 2003, 94, 174-185.  | 1.1  | 40        |
| 36 | Microstructural study of epitaxial platinum and Permalloy/platinum films grown on (0001) sapphire. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2001, 81, 2073-2094.   | 0.7  | 27        |

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|----|--|-----|-----------|
| 37 | Multilayer Materials for Electrostatic Switches. Materials Research Society Symposia Proceedings, 2000, 657, 511.  | 0.1 | 0         |
| 38 | Stress Evolution During Growth of Sputtered Ni/Cu Multilayers. Materials Research Society Symposia Proceedings, 1998, 528, 161.  | 0.1 | 6         |
| 39 | Effects of lamination on soft magnetic properties of FeN films on sloping surfaces. Journal of Applied Physics, 1997, 81, 4507-4509.   | 1.1 | 11        |
| 40 | Stress Evolution In Sputtered Fcc Metal Multilayers. Materials Research Society Symposia Proceedings, 1997, 505, 589.  | 0.1 | 4         |
| 41 | Magnetic Anisotropy and Rotational Hysteresis Loss in Epitaxial TbFe <sub>2</sub> (110) Films. Materials Research Society Symposia Proceedings, 1997, 475, 321.                        | 0.1 | 1         |
| 42 | In-Situ Observation of Stress in Cu/Pd Multilayers. Materials Research Society Symposia Proceedings, 1995, 382, 279.   | 0.1 | 5         |
| 43 | The elastic biaxial modulus of Ag/Pd multilayered thin films measured using the bulge test. Journal of Materials Research, 1994, 9, 25-30.   | 1.2 | 41        |
| 44 | Magnetic and structural modifications in Fe and Ni films prepared by ion-assisted deposition. Journal of Applied Physics, 1994, 75, 5644-5646.   | 1.1 | 22        |
| 45 | Mechanical Properties of Ag/Cr Multilayered Epitaxial thin Films. Materials Research Society Symposia Proceedings, 1994, 356, 363.   | 0.1 | 6         |
| 46 | Interfacial Structure and Mechanical Properties of Compositionally-Modulated Au-Ni thin Films. Materials Research Society Symposia Proceedings, 1994, 343, 555.                        | 0.1 | 13        |
| 47 | In-Situ Observation of The Initial Stages of Co (0001) Epitaxy on Pt (111) Using Grazing Incidence X-Ray Diffraction. Materials Research Society Symposia Proceedings, 1993, 312, 291. | 0.1 | 2         |
| 48 | Giant Magnetoresistance in Annealed Fe/Cr Multilayers. Materials Research Society Symposia Proceedings, 1993, 313, 197.  | 0.1 | 7         |
| 49 | Structure and Magnetic Properties of Fe/Zr Multilayer Films. Materials Research Society Symposia Proceedings, 1993, 313, 731.  | 0.1 | 0         |
| 50 | Structural Characterization of Pt/Co Multilayers for Magneto-optic Recording Using X-Ray Diffraction. Materials Research Society Symposia Proceedings, 1993, 313, 799.                 | 0.1 | 2         |
| 51 | Structural Properties of Anisotropic PtCo(001) and PtFe(001) Thin Films on MgO(001). Materials Research Society Symposia Proceedings, 1993, 311, 9.                                    | 0.1 | 1         |
| 52 | Magnetic and Magneto-Optic Properties of PtFe (001) and PtCo (001) Thin Films. Materials Research Society Symposia Proceedings, 1993, 313, 805.  | 0.1 | 2         |
| 53 | The Role of Next-Nearest Neighbors in The Neel Model of Surface Anisotropy for BCC Crystals. Materials Research Society Symposia Proceedings, 1991, 231, 453.                          | 0.1 | 2         |