

Cornelia Rodenburg

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6984258/publications.pdf>

Version: 2024-02-01

88
papers

1,678
citations

304743

22
h-index

361022

35
g-index

92
all docs

92
docs citations

92
times ranked

2062
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Industrial scale manufactured superlattice hard PVD coatings. <i>Surface Engineering</i> , 2001, 17, 15-27. | 2.2 | 117 |
| 2 | A quantitative analysis of the influence of carbides size distributions on wear behaviour of high-speed steel in dry rolling/sliding contact. <i>Acta Materialia</i> , 2007, 55, 2443-2454. | 7.9 | 96 |
| 3 | High-Efficiency Spray-Coated Perovskite Solar Cells Utilizing Vacuum-Assisted Solution Processing. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 39428-39434. | 8.0 | 74 |
| 4 | High-Performance Multilayer Encapsulation for Perovskite Photovoltaics. <i>Advanced Energy Materials</i> , 2018, 8, 1801234. | 19.5 | 68 |
| 5 | Quantitative secondary electron energy filtering in a scanning electron microscope and its applications. <i>Ultramicroscopy</i> , 2007, 107, 140-150. | 1.9 | 56 |
| 6 | Sub-nanometre resolution imaging of polymer-fullerene photovoltaic blends using energy-filtered scanning electron microscopy. <i>Nature Communications</i> , 2015, 6, 6928. | 12.8 | 56 |
| 7 | High resolution quantitative two-dimensional dopant mapping using energy-filtered secondary electron imaging. <i>Journal of Applied Physics</i> , 2006, 100, 054901. | 2.5 | 51 |
| 8 | Energy selective scanning electron microscopy to reduce the effect of contamination layers on scanning electron microscope dopant mapping. <i>Ultramicroscopy</i> , 2010, 110, 1185-1191. | 1.9 | 47 |
| 9 | Localized effect of Pb^{2+} excess in perovskite solar cells probed by high-resolution chemical-optoelectronic mapping. <i>Journal of Materials Chemistry A</i> , 2018, 6, 23010-23018. | 10.3 | 47 |
| 10 | The effect of residual palladium catalyst on the performance and stability of PCDTBT:PC70BM organic solar cells. <i>Organic Electronics</i> , 2015, 27, 266-273. | 2.6 | 46 |
| 11 | Optimizing and quantifying dopant mapping using a scanning electron microscope with a through-the-lens detector. <i>Applied Physics Letters</i> , 2003, 83, 293-295. | 3.3 | 37 |
| 12 | Investigation of intermixing in TiAlN/VN nanoscale multilayer coatings by energy-filtered TEM. <i>Surface and Coatings Technology</i> , 2002, 151-152, 209-213. | 4.8 | 33 |
| 13 | Dark electrical bias effects on moisture-induced degradation in inverted lead halide perovskite solar cells measured by using advanced chemical probes. <i>Sustainable Energy and Fuels</i> , 2018, 2, 905-914. | 4.9 | 32 |
| 14 | Hot workability of spray-formed AISI M3:2 high-speed steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004, 386, 420-427. | 5.6 | 31 |
| 15 | Efficient perovskite photovoltaic devices using chemically doped PCDTBT as a hole-transport material. <i>Journal of Materials Chemistry A</i> , 2017, 5, 15714-15723. | 10.3 | 29 |
| 16 | A comprehensive Monte Carlo calculation of dopant contrast in secondary-electron imaging. <i>Europhysics Letters</i> , 2008, 82, 30006. | 2.0 | 28 |
| 17 | Imaging the Bulk Nanoscale Morphology of Organic Solar Cell Blends Using Helium Ion Microscopy. <i>Nano Letters</i> , 2011, 11, 4275-4281. | 9.1 | 28 |
| 18 | Oxidation Behavior and Mechanisms of TiAlN/VN Coatings. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2007, 38, 2464-2478. | 2.2 | 26 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 19 | Quantitative secondary electron imaging for work function extraction at atomic level and layer identification of graphene. <i>Scientific Reports</i> , 2016, 6, 21045. | 3.3 | 26 |
| 20 | Effect of experimental parameters on doping contrast of Si p-n junctions in a FEG-SEM. <i>Microelectronic Engineering</i> , 2004, 73-74, 948-953. | 2.4 | 25 |
| 21 | The interface between TiAlN hard coatings and steel substrates generated by high energetic Cr+ bombardment. <i>Surface and Coatings Technology</i> , 2000, 125, 66-70. | 4.8 | 24 |
| 22 | Low-Voltage SEM of Natural Plant Fibers: Microstructure Properties (Surface and Cross-Section) and their Link to the Tensile Properties. <i>Procedia Engineering</i> , 2017, 200, 295-302. | 1.2 | 24 |
| 23 | New perspectives on nano-engineering by secondary electron spectroscopy in the helium ion and scanning electron microscope. <i>MRS Communications</i> , 2018, 8, 226-240. | 1.8 | 23 |
| 24 | Spinning Beta Silks Requires Both pH Activation and Extensional Stress. <i>Advanced Functional Materials</i> , 2021, 31, 2103295. | 14.9 | 22 |
| 25 | Site-specific dopant profiling in a scanning electron microscope using focused ion beam prepared specimens. <i>Applied Physics Letters</i> , 2006, 88, 212110. | 3.3 | 21 |
| 26 | Stoichiometry-dependent local instability in MAPbI ₃ perovskite materials and devices. <i>Journal of Materials Chemistry A</i> , 2018, 6, 23578-23586. | 10.3 | 21 |
| 27 | Shortlisted substrate ion etching in combined steered cathodic arc-ubm deposition system: effects on interface architecture, adhesion, and tool performance. <i>Surface Engineering</i> , 2000, 16, 176-180. | 2.2 | 20 |
| 28 | Mapping Nanostructural Variations in Silk by Secondary Electron Hyperspectral Imaging. <i>Advanced Materials</i> , 2017, 29, 1703510. | 21.0 | 20 |
| 29 | Mapping the potential within a nanoscale undoped GaAs region using a scanning electron microscope. <i>Applied Physics Letters</i> , 2004, 84, 2109-2111. | 3.3 | 19 |
| 30 | Mapping Polymer Molecular Order in the SEM with Secondary Electron Hyperspectral Imaging. <i>Advanced Science</i> , 2019, 6, 1801752. | 11.2 | 19 |
| 31 | Indium-free multilayer semi-transparent electrodes for polymer solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2016, 144, 600-607. | 6.2 | 18 |
| 32 | Monitoring Carbon in Electron and Ion Beam Deposition within FIB-SEM. <i>Materials</i> , 2021, 14, 3034. | 2.9 | 18 |
| 33 | The Effect of Oxide Overlayers on Secondary Electron Dopant Mapping. <i>Microscopy and Microanalysis</i> , 2009, 15, 237-243. | 0.4 | 17 |
| 34 | Exploiting Plasma Exposed, Natural Surface Nanostructures in Ramie Fibers for Polymer Composite Applications. <i>Materials</i> , 2019, 12, 1631. | 2.9 | 17 |
| 35 | Mesoscale structure development reveals when a silkworm silk is spun. <i>Nature Communications</i> , 2021, 12, 3711. | 12.8 | 17 |
| 36 | Nanoscale Mapping of Bromide Segregation on the Cross Sections of Complex Hybrid Perovskite Photovoltaic Films Using Secondary Electron Hyperspectral Imaging in a Scanning Electron Microscope. <i>ACS Omega</i> , 2017, 2, 2126-2133. | 3.5 | 16 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 37 | Understanding Surface Modifications Induced via Argon Plasma Treatment through Secondary Electron Hyperspectral Imaging. <i>Advanced Science</i> , 2021, 8, 2003762. | 11.2 | 16 |
| 38 | Quantitative dopant contrast in the helium ion microscope. <i>Europhysics Letters</i> , 2009, 86, 26005. | 2.0 | 15 |
| 39 | Searching for order in atmospheric pressure plasma jets. <i>Plasma Physics and Controlled Fusion</i> , 2018, 60, 014038. | 2.1 | 15 |
| 40 | Anisotropic Approach for Simulating Electron Transport in Layered Materials: Computational and Experimental Study of Highly Oriented Pyrolytic Graphite. <i>Journal of Physical Chemistry C</i> , 2018, 122, 10159-10166. | 3.1 | 14 |
| 41 | Making Sense of Complex Carbon and Metal/Carbon Systems by Secondary Electron Hyperspectral Imaging. <i>Advanced Science</i> , 2019, 6, 1900719. | 11.2 | 14 |
| 42 | Dopant contrast in the helium ion microscope. <i>Europhysics Letters</i> , 2009, 85, 46001. | 2.0 | 13 |
| 43 | Sub-5 nm graphene nanopore fabrication by nitrogen ion etching induced by a low-energy electron beam. <i>Nanotechnology</i> , 2016, 27, 195302. | 2.6 | 13 |
| 44 | Comparative study of image contrast in scanning electron microscope and helium ion microscope. <i>Journal of Microscopy</i> , 2017, 268, 313-320. | 1.8 | 13 |
| 45 | Controlling PbI ₂ Stoichiometry during Synthesis to Improve the Performance of Perovskite Photovoltaics. <i>Chemistry of Materials</i> , 2021, 33, 554-566. | 6.7 | 13 |
| 46 | Low-voltage SEM of air-sensitive powders: From sample preparation to micro/nano analysis with secondary electron hyperspectral imaging. <i>Micron</i> , 2022, 156, 103234. | 2.2 | 13 |
| 47 | Resolution Limits of Secondary Electron Dopant Contrast in Helium Ion and Scanning Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2011, 17, 637-642. | 0.4 | 12 |
| 48 | Angle selective backscattered electron contrast in the low-voltage scanning electron microscope: Simulation and experiment for polymers. <i>Ultramicroscopy</i> , 2016, 171, 126-138. | 1.9 | 12 |
| 49 | Optimized organometal halide perovskite solar cell fabrication through control of nanoparticle crystal patterning. <i>Journal of Materials Chemistry C</i> , 2017, 5, 2352-2359. | 5.5 | 12 |
| 50 | Novel organic photovoltaic polymer blends: A rapid, 3-dimensional morphology analysis using backscattered electron imaging in the scanning electron microscope. <i>Solar Energy Materials and Solar Cells</i> , 2017, 160, 182-192. | 6.2 | 12 |
| 51 | Tensegrity Modelling and the High Toughness of Spider Dragline Silk. <i>Nanomaterials</i> , 2020, 10, 1510. | 4.1 | 11 |
| 52 | Solvent vapour annealing of methylammonium lead halide perovskite: what's the catch?. <i>Journal of Materials Chemistry A</i> , 2020, 8, 10943-10956. | 10.3 | 11 |
| 53 | High resolution dopant profiling in the SEM, image widths and surface band-bending. <i>Journal of Physics: Conference Series</i> , 2008, 126, 012033. | 0.4 | 10 |
| 54 | Nanoclay/Polymer Composite Powders for Use in Laser Sintering Applications: Effects of Nanoclay Plasma Treatment. <i>Jom</i> , 2017, 69, 2278-2285. | 1.9 | 10 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 55 | Optimizing size and distribution of voids in phenolic resins through the choice of catalyst types. <i>Journal of Applied Polymer Science</i> , 2019, 136, 48249. | 2.6 | 10 |
| 56 | Characterizing Cross-Linking Within Polymeric Biomaterials in the SEM by Secondary Electron Hyperspectral Imaging. <i>Macromolecular Rapid Communications</i> , 2020, 41, e1900484. | 3.9 | 10 |
| 57 | Identifying and mapping chemical bonding within phenolic resin using secondary electron hyperspectral imaging. <i>Polymer Chemistry</i> , 2021, 12, 177-182. | 3.9 | 10 |
| 58 | A novel characterisation approach to reveal the mechano-chemical effects of oxidation and dynamic distension on polypropylene surgical mesh. <i>RSC Advances</i> , 2021, 11, 34710-34723. | 3.6 | 10 |
| 59 | Helium ion microscopy based wall thickness and surface roughness analysis of polymer foams obtained from high internal phase emulsion. <i>Ultramicroscopy</i> , 2014, 139, 13-19. | 1.9 | 9 |
| 60 | Secondary electron spectra of semi-crystalline polymers – A novel polymer characterisation tool? <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2018, 222, 95-105. | 1.7 | 9 |
| 61 | Surface modification of the laser sintering standard powder polyamide 12 by plasma treatments. <i>Plasma Processes and Polymers</i> , 2018, 15, 1800032. | 3.0 | 9 |
| 62 | Revealing Spider Silk's 3D Nanostructure Through Low Temperature Plasma Etching and Advanced Low-Voltage SEM. <i>Frontiers in Materials</i> , 2019, 5, . | 2.4 | 9 |
| 63 | Hot workability of spray-formed AISI M3:2 high-speed steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004, 386, 420-427. | 5.6 | 9 |
| 64 | Arginine-glycine-aspartic acid functional branched semi-interpenetrating hydrogels. <i>Soft Matter</i> , 2015, 11, 7567-7578. | 2.7 | 8 |
| 65 | High-efficiency inverted polymer solar cells via dual effects of introducing the high boiling point solvent and the high conductive PEDOT:PSS layer. <i>Organic Electronics</i> , 2014, 15, 2059-2067. | 2.6 | 7 |
| 66 | Novel plasma treatment for preparation of laser sintered nanocomposite parts. <i>Additive Manufacturing</i> , 2019, 25, 297-306. | 3.0 | 7 |
| 67 | An Accurate Device for Apparent Emissivity Characterization in Controlled Atmospheric Conditions Up To 1423 K. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2020, 69, 4210-4221. | 4.7 | 7 |
| 68 | The role of helium ion microscopy in the characterisation of complex three-dimensional nanostructures. <i>Ultramicroscopy</i> , 2010, 110, 1178-1184. | 1.9 | 6 |
| 69 | The effect of oxidation and carbon contamination on SEM dopant contrast. <i>Journal of Physics: Conference Series</i> , 2010, 241, 012078. | 0.4 | 6 |
| 70 | HelixJet: An innovative plasma source for next-generation additive manufacturing (3D printing). <i>Plasma Processes and Polymers</i> , 2020, 17, 1900099. | 3.0 | 6 |
| 71 | A comprehensive Monte Carlo calculation of dopant contrast in secondary-electron imaging. <i>Europhysics Letters</i> , 2008, 82, 49901. | 2.0 | 5 |
| 72 | Dopant contrast in the Helium Ion Microscope: contrast mechanism. <i>Journal of Physics: Conference Series</i> , 2010, 241, 012076. | 0.4 | 5 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 73 | Surface morphology of silica nanowires at the nanometer scale. Journal of Non-Crystalline Solids, 2011, 357, 3042-3045. | 3.1 | 5 |
| 74 | Energy filtered scanning electron microscopy: applications to characterisation of semiconductors. Journal of Physics: Conference Series, 2010, 241, 012074. | 0.4 | 4 |
| 75 | Interfacial Morphology between Ramie Fibers and Phenolic Resins: Effects of Plasma Treatment and Cure Cycle. Journal of Composite Materials, 2022, 56, 889-897. | 2.4 | 4 |
| 76 | Nanoscale Mapping of Semi-Crystalline Polypropylene. Physica Status Solidi C: Current Topics in Solid State Physics, 2017, 14, 1700153. | 0.8 | 4 |
| 77 | Progress towards site-specific dopant profiling in the scanning electron microscope. Journal of Physics: Conference Series, 2010, 209, 012068. | 0.4 | 3 |
| 78 | Feasibility of Plasma Treated Clay in Clay/Polymer Nanocomposites Powders for use Laser Sintering (LS). IOP Conference Series: Materials Science and Engineering, 2017, 195, 012003. | 0.6 | 3 |
| 79 | One Year On: New and Unique Applications of He Ion Microscopy. Microscopy and Microanalysis, 2009, 15, 652-653. | 0.4 | 2 |
| 80 | Energy filtered scanning electron microscopy: Applications to dopant contrast. Journal of Physics: Conference Series, 2010, 209, 012053. | 0.4 | 2 |
| 81 | Helium ion microscopy and energy selective scanning electron microscopy – two advanced microscopy techniques with complementary applications. Journal of Physics: Conference Series, 2014, 522, 012049. | 0.4 | 2 |
| 82 | Application of low-voltage backscattered electron imaging to the mapping of organic photovoltaic blend morphologies. Journal of Physics: Conference Series, 2015, 644, 012017. | 0.4 | 2 |
| 83 | Separating topographical and chemical analysis of nanostructure of polymer composite in low voltage SEM. Journal of Physics: Conference Series, 2015, 644, 012018. | 0.4 | 2 |
| 84 | Effect of experimental parameters on doping contrast of Si p-n junctions in a FEG-SEM. Microelectronic Engineering, 2004, 73-74, 948-953. | 2.4 | 2 |
| 85 | The influence of beam energy and oxidation on quantitative carbide analysis in the scanning electron microscope. Journal of Applied Physics, 2006, 100, 114902. | 2.5 | 1 |
| 86 | Energy Selective Secondary Electron Detection in SEM for the Characterization of Polymers. Microscopy and Microanalysis, 2011, 17, 880-881. | 0.4 | 1 |
| 87 | Comparison of multilayered nanowire imaging by SEM and Helium Ion Microscopy. Journal of Physics: Conference Series, 2010, 241, 012080. | 0.4 | 0 |
| 88 | Investigation of Perovskite Solar Cells Homogeneity and Defects by Complementary High-Resolution Mapping Techniques. , 0, , . | | 0 |