

Bernd Rauschenbach

List of Publications by Year in descending order

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79
papers

1,886
citations

236925

25
h-index

302126

39
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80
all docs

80
docs citations

80
times ranked

1751
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Temperature dependent evolution of local structure in chalcogenide-based superlattices. Applied Surface Science, 2021, 536, 147959. | 6.1 | 42 |
| 2 | Epitaxial layered Sb ₂ Te ₃ thin films for memory and neuromorphic applications. 2D Materials, 2021, 8, 045027. | 4.4 | 14 |
| 3 | Structural Transitions in Ge ₂ Sb ₂ Te ₅ Phase Change Memory Thin Films Induced by Nanosecond UV Optical Pulses. Materials, 2020, 13, 2082. | 2.9 | 13 |
| 4 | Biaxially Textured Titanium Thin Films by Oblique Angle Deposition: Conditions and Growth Mechanisms. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900636. | 1.8 | 4 |
| 5 | Impact of interfaces on bipolar resistive switching behavior in amorphous GeSbTe thin films. Journal Physics D: Applied Physics, 2020, 53, 184002. | 2.8 | 13 |
| 6 | Strain-induced phase selection in epitaxial $G_e S b T e$ thin films | 2.4 | 3 |
| 7 | Direct Measurement of Crystal Growth Velocity in Epitaxial Phase-Change Material Thin Films. ACS Applied Materials & Interfaces, 2019, 11, 41544-41550. | 8.0 | 13 |
| 8 | Influence of nitrogen ion species on mass-selected low energy ion-assisted growth of epitaxial GaN thin films. Applied Surface Science, 2019, 498, 143830. | 6.1 | 1 |
| 9 | <i>In situ</i> observations of the reversible vacancy ordering process in van der Waals-bonded GeSbTe thin films and GeTeSb ₂ Te ₃ superlattices. Nanoscale, 2019, 11, 10838-10845. | 5.6 | 43 |
| 10 | Au and Ag films and nanostructures for detection of fungicide mancozeb: SERS analyses. , 2019, , . | | 9 |
| 11 | Atomic-scale observation of defects motion in van der Waals layered chalcogenide based materials. Scripta Materialia, 2019, 166, 154-158. | 5.2 | 17 |
| 12 | Influence of substrate dimensionality on the growth mode of epitaxial 3D-bonded GeTe thin films: From 3D to 2D growth. Materials and Design, 2019, 168, 107657. | 7.0 | 18 |
| 13 | Phase change thin films for non-volatile memory applications. Nanoscale Advances, 2019, 1, 3836-3857. | 4.6 | 97 |
| 14 | Crystalline Ti-nanostructures prepared by oblique angle deposition at room temperature. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2018, 36, . | 1.2 | 4 |
| 15 | Van der Waals interfacial bonding and intermixing in GeTe-Sb ₂ Te ₃ -based superlattices. Nano Research, 2018, 11, 1676-1686. | 10.4 | 62 |
| 16 | SERS analyses of thiamethoxam assisted by Ag films and nanostructures produced by laser techniques. Journal of Raman Spectroscopy, 2018, 49, 397-403. | 2.5 | 15 |
| 17 | Ultrafast interfacial transformation from 2D- to 3D-bonded structures in layered GeSbTe thin films and heterostructures. Nanoscale, 2018, 10, 22946-22953. | 5.6 | 36 |
| 18 | Glancing Angle Deposition for Biosensing Applications. , 2018, , 129-137. | | 2 |

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|----|--|-----|-----------|
| 19 | Comparative study of sculptured metallic thin films deposited by oblique angle deposition at different temperatures. Beilstein Journal of Nanotechnology, 2018, 9, 954-962. | 2.8 | 15 |
| 20 | Impact of disorder on optical reflectivity contrast of epitaxial Ge ₂ Sb ₂ Te ₅ thin films. CrystEngComm, 2018, 20, 3688-3695. | 2.6 | 22 |
| 21 | Realization of Multilevel States in Phase-Change Thin Films by Fast Laser Pulse Irradiation. Advanced Optical Materials, 2017, 5, 1700169. | 7.3 | 43 |
| 22 | Graphene on silicon dioxide via carbon ion implantation in copper with PMMA-free transfer. Applied Physics Letters, 2017, 110, . | 3.3 | 4 |
| 23 | Research Update: Van-der-Waals epitaxy of layered chalcogenide Sb ₂ Te ₃ thin films grown by pulsed laser deposition. APL Materials, 2017, 5, 050701. | 5.1 | 37 |
| 24 | Glancing angle deposition of sculptured thin metal films at room temperature. Nanotechnology, 2017, 28, 385604. | 2.6 | 23 |
| 25 | Topography evolution of germanium thin films synthesized by pulsed laser deposition. AIP Advances, 2017, 7, . | 1.3 | 5 |
| 26 | Atomic structure and dynamic reconfiguration of layered defects in van der Waals layered Ge-Sb-Te based materials. Acta Materialia, 2017, 141, 92-96. | 7.9 | 59 |
| 27 | Ion mass and energy selective hyperthermal ion-beam assisted deposition setup. Review of Scientific Instruments, 2017, 88, 063306. | 1.3 | 5 |
| 28 | Epitaxial formation of cubic and trigonal Ge-Sb-Te thin films with heterogeneous vacancy structures. Materials and Design, 2017, 115, 138-146. | 7.0 | 36 |
| 29 | Enhanced intrinsic fluorescence from carboxidized nano-sculptured thin films of silver and their application for label free dual detection of glycyated hemoglobin. Optics Express, 2017, 25, 4761. | 3.4 | 14 |
| 30 | Ion Beam Assisted Deposition of Thin Epitaxial GaN Films. Materials, 2017, 10, 690. | 2.9 | 8 |
| 31 | Microstructure evolution in pulsed laser deposited epitaxial Ge-Sb-Te chalcogenide thin films. Journal of Alloys and Compounds, 2016, 676, 582-590. | 5.5 | 32 |
| 32 | Epitaxial Ge ₂ Sb ₂ Te ₅ films on Si(111) prepared by pulsed laser deposition. Thin Solid Films, 2016, 619, 81-85. | 1.8 | 14 |
| 33 | Local atomic arrangements and lattice distortions in layered Ge-Sb-Te crystal structures. Scientific Reports, 2016, 6, 26724. | 3.3 | 42 |
| 34 | Crystallization of Ge ₂ Sb ₂ Te ₅ thin films by nano- and femtosecond single laser pulse irradiation. Scientific Reports, 2016, 6, 28246. | 3.3 | 68 |
| 35 | Real-space imaging of atomic arrangement and vacancy layers ordering in laser crystallised Ge ₂ Sb ₂ Te ₅ phase change thin films. Acta Materialia, 2016, 105, 1-8. | 7.9 | 84 |
| 36 | Embedded Ge nanocrystals in SiO ₂ synthesized by ion implantation. Journal of Applied Physics, 2015, 118, . | 2.5 | 12 |

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|----|---|------|-----------|
| 37 | Focused high- and low-energy ion milling for TEM specimen preparation. <i>Microelectronics Reliability</i> , 2015, 55, 2119-2125. | 1.7 | 51 |
| 38 | Highly sensitive and specific detection of <i>E. coli</i> by a SERS nanobiosensor chip utilizing metallic nanosculptured thin films. <i>Analyst</i> , 2015, 140, 3201-3209. | 3.5 | 80 |
| 39 | An aberration-corrected STEM study of structural defects in epitaxial GaN thin films grown by ion beam assisted MBE. <i>Micron</i> , 2015, 73, 1-8. | 2.2 | 18 |
| 40 | Low temperature epitaxy of Ge-Sb-Te films on BaF ₂ (111) by pulsed laser deposition. <i>Applied Physics Letters</i> , 2014, 105, 221908. | 3.3 | 21 |
| 41 | Direct imaging of light elements by annular dark-field aberration-corrected scanning transmission electron microscopy. <i>Applied Physics Letters</i> , 2014, 104, 071908. | 3.3 | 14 |
| 42 | Epitaxial growth of Ge-Sb-Te films on KCl by high deposition rate pulsed laser deposition. <i>Journal of Applied Physics</i> , 2014, 115, 213504. | 2.5 | 12 |
| 43 | Direct imaging of crystal structure and defects in metastable Ge ₂ Sb ₂ Te ₅ by quantitative aberration-corrected scanning transmission electron microscopy. <i>Applied Physics Letters</i> , 2014, 104, . | 3.3 | 51 |
| 44 | High-fluence hyperthermal ion irradiation of gallium nitride surfaces at elevated temperatures. <i>Applied Surface Science</i> , 2014, 317, 811-817. | 6.1 | 6 |
| 45 | SERS Biosensor Using Metallic Nano-Sculptured Thin Films for the Detection of Endocrine Disrupting Compound Biomarker Vitellogenin. <i>Small</i> , 2014, 10, 3579-3587. | 10.0 | 78 |
| 46 | Detailed study of surface-enhanced Raman scattering from metallic nanosculptured thin films and their potential for biosensing. <i>Journal of Nanophotonics</i> , 2012, 6, 061605-1. | 1.0 | 24 |
| 47 | Back Cover: Non-periodic nanoscale templates by diffraction mask projection laser ablation (Phys.) <i>Tj ETQq1 1 0.784314 rgBT / Overbo</i> 1.8 | 1.8 | 0 |
| 48 | Effects of annealing on arrays of Ge nanocolumns formed by glancing angle deposition. <i>Applied Surface Science</i> , 2012, 258, 9762-9769. | 6.1 | 8 |
| 49 | Non-periodic nanoscale templates by diffraction mask projection laser ablation. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2012, 209, 2208-2211. | 1.8 | 1 |
| 50 | Epitaxial GaN films by hyperthermal ion-beam nitridation of Ga droplets. <i>Journal of Applied Physics</i> , 2012, 111, 113521. | 2.5 | 14 |
| 51 | Initial stages of the ion-beam assisted epitaxial GaN film growth on 6H-SiC(0001). <i>Thin Solid Films</i> , 2012, 520, 3936-3945. | 1.8 | 18 |
| 52 | Growth temperature altered morphology of Ge nanocolumns. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2011, 208, 851-856. | 1.8 | 13 |
| 53 | Glancing angle deposition of Ge nanorod arrays on Si patterned substrates. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2011, 29, . | 2.1 | 11 |
| 54 | Optimized growth of Ge nanorod arrays on Si patterns. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2011, 29, 051501. | 2.1 | 13 |

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|----|---|-----|-----------|
| 55 | Dünne Schichten durch Deposition unter streifenden Einfall. <i>Vakuum in Forschung Und Praxis</i> , 2010, 22, 14-19. | 0.1 | 2 |
| 56 | Nanostructures by diffraction mask projection laser ablation. <i>Physica Status Solidi (B): Basic Research</i> , 2010, 247, 1372-1383. | 1.5 | 12 |
| 57 | Arbitrarily shaped Si nanostructures by glancing angle ion beam sputter deposition. <i>Physica Status Solidi (B): Basic Research</i> , 2010, 247, 1310-1321. | 1.5 | 23 |
| 58 | Periodically arranged Si nanostructures by glancing angle deposition on patterned substrates. <i>Physica Status Solidi (B): Basic Research</i> , 2010, 247, 1322-1334. | 1.5 | 29 |
| 59 | Tubular magnetic nanostructures based on glancing angle deposited templates and atomic layer deposition. <i>Physica Status Solidi (B): Basic Research</i> , 2010, 247, 1365-1371. | 1.5 | 25 |
| 60 | Gold nanostructure matrices by diffraction mask-projection laser ablation: extension to previously inaccessible substrates. <i>Nanotechnology</i> , 2010, 21, 175304. | 2.6 | 9 |
| 61 | Influence of substrate temperature on glancing angle deposited Ag nanorods. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2010, 28, 1002-1009. | 2.1 | 30 |
| 62 | Plasmonic Activity of Large-Area Gold Nanodot Arrays on Arbitrary Substrates. <i>Nano Letters</i> , 2010, 10, 47-51. | 9.1 | 20 |
| 63 | Surface-enhanced fluorescence from metal sculptured thin films with application to biosensing in water. <i>Applied Physics Letters</i> , 2009, 94, 063106. | 3.3 | 65 |
| 64 | Patterning concept for sculptured nanostructures with arbitrary periods. <i>Applied Physics Letters</i> , 2009, 95, 103107. | 3.3 | 8 |
| 65 | Ion beam induced anisotropic deformation of Si nanosprings. <i>Journal Physics D: Applied Physics</i> , 2009, 42, 145404. | 2.8 | 7 |
| 66 | Large area metal dot matrices made by diffraction mask projection laser ablation. <i>Physica Status Solidi - Rapid Research Letters</i> , 2008, 2, 34-36. | 2.4 | 14 |
| 67 | Growth of Si nanorods in honeycomb and hexagonal-closed-packed arrays using glancing angle deposition. <i>Journal of Applied Physics</i> , 2008, 103, . | 2.5 | 23 |
| 68 | Glancing angle sputter deposited nanostructures on rotating substrates: Experiments and simulations. <i>Journal of Applied Physics</i> , 2008, 104, . | 2.5 | 61 |
| 69 | Temperature effect on the glancing angle deposition of Si sculptured thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2008, 26, 881-886. | 2.1 | 31 |
| 70 | Rapid thermal and swift heavy ion induced annealing of Co ion implanted GaN films. <i>Journal of Applied Physics</i> , 2008, 103, 124904. | 2.5 | 6 |
| 71 | Ordered silicon nanostructures by ion beam induced glancing angle deposition. <i>Journal of Vacuum Science & Technology B</i> , 2007, 25, 833. | 1.3 | 27 |
| 72 | Chiral silicon nanostructures. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2006, 244, 40-44. | 1.4 | 17 |

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|----|--|-----|-----------|
| 73 | A new mask blank deposition tool. <i>Microelectronic Engineering</i> , 2006, 83, 718-722. | 2.4 | 1 |
| 74 | Nanoscale laser patterning of thin gold films. <i>Philosophical Magazine Letters</i> , 2006, 86, 661-667. | 1.2 | 11 |
| 75 | Recrystallization behavior in chiral sculptured thin films from silicon. <i>Journal of Applied Physics</i> , 2006, 100, 016107. | 2.5 | 17 |
| 76 | Nanostructure fabrication by glancing angle ion beam assisted deposition of silicon. <i>Applied Physics A: Materials Science and Processing</i> , 2005, 81, 481-486. | 2.3 | 29 |
| 77 | Ion beam sputter deposition of soft x-ray Mo/Si multilayer mirrors. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2005, 23, 959. | 1.6 | 13 |
| 78 | Comparison of ion-beam-assisted molecular beam epitaxy with conventional molecular beam epitaxy of thin hexagonal gallium nitride films. <i>Journal of Crystal Growth</i> , 2004, 264, 184-191. | 1.5 | 24 |
| 79 | Semiconductor Nanowires Prepared by Diffraction-Mask-Projection Excimer-Laser Patterning. <i>Nano Letters</i> , 2004, 4, 895-897. | 9.1 | 20 |