# Mauritius C M Van De Sanden

List of Publications by Year
in descending order



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|---|---|---|---|
| 469 papers | 19,894 citations | 12330 69 h-index | 18130 120 g-index |
| 478 all docs | 478 docs citations | 478 times ranked | 13295 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | The 2017 Plasma Roadmap: Low temperature plasma science and technology. Journal Physics D: Applied Physics, 2017, 50, 323001. | 2.8 | 710 |
| 2 | Plasma-Assisted Atomic Layer Deposition: Basics, Opportunities, and Challenges. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2011, 29, . | 2.1 | 678 |
| 3 | Ultralow surface recombination of c-Si substrates passivated by plasma-assisted atomic layer deposited Al2O3. Applied Physics Letters, 2006, 89, 042112. | 3.3 | 646 |
| 4 | On the c-Si surface passivation mechanism by the negative-charge-dielectric Al2O3. Journal of Applied Physics, 2008, 104, . | 2.5 | 479 |
| 5 | Silicon surface passivation by atomic layer deposited Al2O3. Journal of Applied Physics, 2008, 104, . | 2.5 | 415 |
| 6 | Surface passivation of highâ€efficiency silicon solar cells by atomicâ€layerâ€deposited Al<sub>2</sub>O<sub>3</sub>. Progress in Photovoltaics: Research and Applications, 2008, 16, 461-466. | 8.1 | 414 |
| 7 | Excellent passivation of highly doped p-type Si surfaces by the negative-charge-dielectric Al2O3. Applied Physics Letters, 2007, 91, . | 3.3 | 370 |
| 8 | Optical constants of graphene measured by spectroscopic ellipsometry. Applied Physics Letters, 2010, 97, . | 3.3 | 348 |
| 9 | Determining the material structure of microcrystalline silicon from Raman spectra. Journal of Applied Physics, 2003, 94, 3582-3588. | 2.5 | 325 |
| 10 | High efficiency n-type Si solar cells on Al2O3-passivated boron emitters. Applied Physics Letters, 2008, 92, . | 3.3 | 316 |
| 11 | In situspectroscopic ellipsometry as a versatile tool for studying atomic layer deposition. Journal Physics D: Applied Physics, 2009, 42, 073001. | 2.8 | 249 |
| 12 | Vacancies and voids in hydrogenated amorphous silicon. Applied Physics Letters, 2003, 82, 1547-1549. | 3.3 | 246 |
| 13 | Plasma-assisted atomic layer deposition of Al2O3 moisture permeation barriers on polymers. Applied Physics Letters, 2006, 89, 081915. | 3.3 | 244 |
| 14 | Plasma and Thermal ALD of Al[sub 2]O[sub 3] in a Commercial 200â€mm ALD Reactor. Journal of the Electrochemical Society, 2007, 154, G165. | 2.9 | 237 |
| 15 | Influence of the Deposition Temperature on the c-Si Surface Passivation by Al[sub 2]O[sub 3] Films Synthesized by ALD and PECVD. Electrochemical and Solid-State Letters, 2010, 13, H76. | 2.2 | 198 |
| 16 | Waveguide Nanowire Superconducting Single-Photon Detectors Fabricated on GaAs and the Study of Their Optical Properties. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 1-10. | 2.9 | 188 |
| 17 | Silicon surface passivation by ultrathin Al<sub>2</sub>O<sub>3</sub> films synthesized by thermal and plasma atomic layer deposition. Physica Status Solidi - Rapid Research Letters, 2010, 4, 10-12. | 2.4 | 185 |
| 18 | Hydrogen induced passivation of Si interfaces by Al2O3 films and SiO2/Al2O3 stacks. Applied Physics Letters, 2010, 97, . | 3.3 | 168 |

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| 19 | Conformality of Plasma-Assisted ALD: Physical Processes and Modeling. Journal of the Electrochemical Society, 2010, 157, G241. | 2.9 | 157 |
| 20 | Plasmaâ€driven dissociation of CO<sub>2</sub> for fuel synthesis. Plasma Processes and Polymers, 2017, 14, 1600126. | 3.0 | 152 |
| 21 | Low Temperature Plasma-Enhanced Atomic Layer Deposition of Metal Oxide Thin Films. Journal of the Electrochemical Society, 2010, 157, P66. | 2.9 | 151 |
| 22 | Influence of the Oxidant on the Chemical and Field-Effect Passivation of Si by ALD Al[sub 2]O[sub 3]. Electrochemical and Solid-State Letters, 2011, 14, H1. | 2.2 | 151 |
| 23 | Controlling the fixed charge and passivation properties of Si(100)/Al2O3 interfaces using ultrathin SiO2 interlayers synthesized by atomic layer deposition. Journal of Applied Physics, 2011, 110, . | 2.5 | 150 |
| 24 | Taming microwave plasma to beat thermodynamics in CO<sub>2</sub> dissociation. Faraday Discussions, 2015, 183, 233-248. | 3.2 | 150 |
| 25 | Stability of Al2O3 and Al2O3/a-SiNx:H stacks for surface passivation of crystalline silicon. Journal of Applied Physics, 2009, 106, . | 2.5 | 145 |
| 26 | In Situ Observation of Nanoparticle Exsolution from Perovskite Oxides: From Atomic Scale Mechanistic Insight to Nanostructure Tailoring. ACS Nano, 2019, 13, 12996-13005. | 14.6 | 144 |
| 27 | The 2022 Plasma Roadmap: low temperature plasma science and technology. Journal Physics D: Applied Physics, 2022, 55, 373001. | 2.8 | 139 |
| 28 | Thermodynamic generalization of the Saha equation for a two-temperature plasma. Physical Review A, 1989, 40, 5273-5276. | 2.5 | 138 |
| 29 | Influence of annealing and Al2O3 properties on the hydrogen-induced passivation of the Si/SiO2 interface. Journal of Applied Physics, 2012, 111, . | 2.5 | 133 |
| 30 | Negative charge and charging dynamics in Al2O3 films on Si characterized by second-harmonic generation. Journal of Applied Physics, 2008, 104, . | 2.5 | 131 |
| 31 | Relation of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">Si</mml:mi><mml:mo>î—¸</mml:mo><mml:mi mathvariant="normal">H</mml:mi></mml:mrow></mml:math>stretching frequency to the nanostructural<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">Si</mml:mi><mml:mo>î—¸</mml:mo><mml:mi | 3.2 | 123 |
| 32 | Surface chemistry of plasma-assisted atomic layer deposition of Al2O3 studied by infrared spectroscopy. Applied Physics Letters, 2008, 92, . | 3.3 | 117 |
| 33 | Role of field-effect on c-Si surface passivation by ultrathin (2â€“20 nm) atomic layer deposited Al2O3. Applied Physics Letters, 2010, 96, . | 3.3 | 117 |
| 34 | A combined Thomsonâ€“Rayleigh scattering diagnostic using an intensified photodiode array. Review of Scientific Instruments, 1992, 63, 3369-3377. | 1.3 | 113 |
| 35 | Plasma chemistry aspects of a-Si:H deposition using an expanding thermal plasma. Journal of Applied Physics, 1998, 84, 2426-2435. | 2.5 | 111 |
| 36 | Surface reactions during atomic layer deposition of Pt derived from gas phase infrared spectroscopy. Applied Physics Letters, 2009, 95, . | 3.3 | 111 |

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| 37 | Atomic layer deposition for nanostructured Li-ion batteries. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2012, 30, . | 2.1 | 111 |
| 38 | Deposition of TiN and HfO2 in a commercial 200mm remote plasma atomic layer deposition reactor. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2007, 25, 1357-1366. | 2.1 | 107 |
| 39 | Remote Plasma ALD of Platinum and Platinum Oxide Films. Electrochemical and Solid-State Letters, 2009, 12, G34. | 2.2 | 107 |
| 40 | Oxygen Evolution at Hematite Surfaces: The Impact of Structure and Oxygen Vacancies on Lowering the Overpotential. Journal of Physical Chemistry C, 2016, 120, 18201-18208. | 3.1 | 107 |
| 41 | Evolution of the electrical and structural properties during the growth of Al doped ZnO films by remote plasma-enhanced metalorganic chemical vapor deposition. Journal of Applied Physics, 2007, 102, 043709. | 2.5 | 106 |
| 42 | Reaction mechanisms during plasma-assisted atomic layer deposition of metal oxides: A case study for Al2O3. Journal of Applied Physics, 2008, 103, . | 2.5 | 101 |
| 43 | Influence of the high-temperature â€œfiringâ€•step on high-rate plasma deposited silicon nitride films used as bulk passivating antireflection coatings on silicon solar cells. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 2123. | 1.6 | 99 |
| 44 | In situ reaction mechanism studies of plasma-assisted atomic layer deposition of Al2O3. Applied Physics Letters, 2006, 89, 131505. | 3.3 | 99 |
| 45 | Hydrogenated amorphous silicon deposited at very high growth rates by an expanding Arâ€“H2â€“SiH4 plasma. Journal of Applied Physics, 2001, 89, 2404-2413. | 2.5 | 98 |
| 46 | Conformal Coverage of Poly(3,4-ethylenedioxythiophene) Films with Tunable Nanoporosity via Oxidative Chemical Vapor Deposition. ACS Nano, 2008, 2, 1959-1967. | 14.6 | 97 |
| 47 | In situspectroscopic ellipsometry study on the growth of ultrathin TiN films by plasma-assisted atomic layer deposition. Journal of Applied Physics, 2006, 100, 023534. | 2.5 | 96 |
| 48 | Efficient Plasma Route to Nanostructure Materials: Case Study on the Use of m-WO<sub>3</sub> for Solar Water Splitting. ACS Applied Materials & Interfaces, 2013, 5, 7621-7625. | 8.0 | 96 |
| 49 | Substrate-biasing during plasma-assisted atomic layer deposition to tailor metal-oxide thin film growth. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2013, 31, . | 2.1 | 95 |
| 50 | CO and byproduct formation during CO2 reduction in dielectric barrier discharges. Journal of Applied Physics, 2014, 116, . | 2.5 | 95 |
| 51 | Low-Temperature Deposition of TiN by Plasma-Assisted Atomic Layer Deposition. Journal of the Electrochemical Society, 2006, 153, G956. | 2.9 | 93 |
| 52 | Argon-hydrogen plasma jet investigated by active and passive spectroscopic means. Physical Review E, 1994, 49, 4397-4406. | 2.1 | 90 |
| 53 | Homogeneous CO<sub>2</sub> conversion by microwave plasma: Wave propagation and diagnostics. Plasma Processes and Polymers, 2017, 14, 1600120. | 3.0 | 90 |
| 54 | Surface textured ZnO films for thin film solar cell applications by expanding thermal plasma CVD. Thin Solid Films, 2001, 392, 226-230. | 1.8 | 89 |

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| 55 | Anomalous fast recombination in hydrogen plasmas involving rovibrational excitation. Physical Review E, 1993, 48, 2098-2102. | 2.1 | 87 |
| 56 | Deposition of TiN and TaN by Remote Plasma ALD for Cu and Li Diffusion Barrier Applications. Journal of the Electrochemical Society, 2008, 155, G287. | 2.9 | 86 |
| 57 | Recombination of argon in an expanding plasma jet. Physical Review E, 1993, 47, 2792-2797. | 2.1 | 85 |
| 58 | Optical and mechanical properties of plasmaâ€beamâ€deposited amorphous hydrogenated carbon. Journal of Applied Physics, 1996, 80, 5986-5995. | 2.5 | 84 |
| 59 | Formation of cationic silicon clusters in a remote silane plasma and their contribution to hydrogenated amorphous silicon film growth. Journal of Applied Physics, 1999, 86, 4029-4039. | 2.5 | 78 |
| 60 | The behaviour of heavy particles in the expanding plasma jet in argon. Plasma Sources Science and Technology, 1994, 3, 501-510. | 3.1 | 77 |
| 61 | Excellent Si surface passivation by low temperature SiO<sub>2</sub> using an ultrathin Al<sub>2</sub>O<sub>3</sub> capping film. Physica Status Solidi - Rapid Research Letters, 2011, 5, 22-24. | 2.4 | 77 |
| 62 | Fluid modelling of CO2 dissociation in a dielectric barrier discharge. Journal of Applied Physics, 2016, 119, . | 2.5 | 77 |
| 63 | Synthesis andin situcharacterization of low-resistivity TaNx films by remote plasma atomic layer deposition. Journal of Applied Physics, 2007, 102, 083517. | 2.5 | 75 |
| 64 | In situ spectroscopic ellipsometry growth studies on the Al-doped ZnO films deposited by remote plasma-enhanced metalorganic chemical vapor deposition. Journal of Applied Physics, 2008, 103, . | 2.5 | 73 |
| 65 | Ion and Photon Surface Interaction during Remote Plasma ALD of Metal Oxides. Journal of the Electrochemical Society, 2011, 158, G88. | 2.9 | 73 |
| 66 | Surface passivation of phosphorusâ€diffused n<sup>+</sup>â€type emitters by plasmaâ€assisted atomicâ€layer deposited Al<sub>2</sub>O<sub>3</sub>. Physica Status Solidi - Rapid Research Letters, 2012, 6, 4-6. | 2.4 | 73 |
| 67 | Time evolution of vibrational temperatures in a CO<sub>2</sub>glow discharge measured with infrared absorption spectroscopy. Plasma Sources Science and Technology, 2017, 26, 115008. | 3.1 | 73 |
| 68 | Highly efficient microcrystalline silicon solar cells deposited from a pure SiH4 flow. Applied Physics Letters, 2005, 87, 263503. | 3.3 | 71 |
| 69 | Plasma for electrification of chemical industry: a case study on CO<sub>2</sub>reduction. Plasma Physics and Controlled Fusion, 2018, 60, 014019. | 2.1 | 71 |
| 70 | Absolute densities of N and excited N2 in a N2 plasma. Applied Physics Letters, 2003, 83, 4918-4920. | 3.3 | 70 |
| 71 | Local deposition of high-purity Pt nanostructures by combining electron beam induced deposition and atomic layer deposition. Journal of Applied Physics, 2010, 107, 116102. | 2.5 | 70 |
| 72 | The influence of partial surface discharging on the electrical characterization of DBDs. Plasma Sources Science and Technology, 2015, 24, 015016. | 3.1 | 70 |

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| 73 | The argon-hydrogen expanding plasma: model and experiments. Plasma Sources Science and Technology, 1995, 4, 74-85. | 3.1 | 68 |
| 74 | Amorphous silicon solar cells on natively textured ZnO grown by PECVD. Thin Solid Films, 2001, 392, 315-319. | 1.8 | 68 |
| 75 | Temperature dependence of the surface roughness evolution during hydrogenated amorphous silicon film growth. Applied Physics Letters, 2003, 82, 865-867. | 3.3 | 68 |
| 76 | High and intermediate temperature sodiumâ€“sulfur batteries for energy storage: development, challenges and perspectives. RSC Advances, 2019, 9, 5649-5673. | 3.6 | 68 |
| 77 | Effective passivation of Si surfaces by plasma deposited SiOx/a-SiNx:H stacks. Applied Physics Letters, 2011, 98, . | 3.3 | 67 |
| 78 | B-spline parametrization of the dielectric function applied to spectroscopic ellipsometry on amorphous carbon. Journal of Applied Physics, 2009, 106, . | 2.5 | 66 |
| 79 | Dielectric Properties of Thermal and Plasma-Assisted Atomic Layer Deposited Al[sub 2]O[sub 3] Thin Films. Journal of the Electrochemical Society, 2011, 158, G21. | 2.9 | 65 |
| 80 | Film growth precursors in a remote SiH[sub 4] plasma used for high-rate deposition of hydrogenated amorphous silicon. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2000, 18, 2153. | 2.1 | 63 |
| 81 | Detection of CH in an expanding argon/acetylene plasma using cavity ring down absorption spectroscopy. Chemical Physics Letters, 1999, 310, 405-410. | 2.6 | 61 |
| 82 | Cavity ring down study of the densities and kinetics of Si and SiH in a remote Ar-H2-SiH4 plasma. Journal of Applied Physics, 2001, 89, 2065-2073. | 2.5 | 61 |
| 83 | Effect of substrate conditions on the plasma beam deposition of amorphous hydrogenated carbon. Journal of Applied Physics, 1997, 82, 2643-2654. | 2.5 | 59 |
| 84 | On the formation mechanisms of the diffuse atmospheric pressure dielectric barrier discharge in CVD processes of thin silica-like films. Plasma Sources Science and Technology, 2009, 18, 045021. | 3.1 | 59 |
| 85 | Optical emission spectroscopy as a tool for studying, optimizing, and monitoring plasma-assisted atomic layer deposition processes. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2010, 28, 77-87. | 2.1 | 59 |
| 86 | Self-Regulated Plasma Heat Flux Mitigation Due to Liquid Sn Vapor Shielding. Physical Review Letters, 2016, 116, 135002. | 7.8 | 59 |
| 87 | Scaling of Si and GaAs trench etch rates with aspect ratio, feature width, and substrate temperature. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1995, 13, 92. | 1.6 | 58 |
| 88 | An expanding thermal plasma for deposition of surface textured ZnO:Al with focus on thin film solar cell applications. Applied Surface Science, 2001, 173, 40-43. | 6.1 | 58 |
| 89 | Plasma beam deposited amorphous hydrogenated carbon: Improved film quality at higher growth rate. Applied Physics Letters, 1996, 69, 152-154. | 3.3 | 57 |
| 90 | High current diffuse dielectric barrier discharge in atmospheric pressure air for the deposition of thin silica-like films. Applied Physics Letters, 2010, 96, . | 3.3 | 57 |

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| 91 | Direct characterization of nanocrystal size distribution using Raman spectroscopy. Journal of Applied Physics, 2013, 114, 134310. | 2.5 | 57 |
| 92 | Molecular dynamics simulations for the growth of diamond-like carbon films from low kinetic energy species. Diamond and Related Materials, 2004, 13, 1873-1881. | 3.9 | 56 |
| 93 | Measurement of absolute radical densities in a plasma using modulated-beam line-of-sight threshold ionization mass spectrometry. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2004, 22, 71-81. | 2.1 | 55 |
| 94 | The importance of thermal dissociation in CO<sub>2</sub> microwave discharges investigated by power pulsing and rotational Raman scattering. Plasma Sources Science and Technology, 2019, 28, 055015. | 3.1 | 55 |
| 95 | Composition and bonding structure of plasmaâ€assisted ALD Al<sub>2</sub>O<sub>3</sub> films. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 976-979. | 0.8 | 53 |
| 96 | Towards Rollâ€toâ€Roll Deposition of High Quality Moisture Barrier Films on Polymers by Atmospheric Pressure Plasma Assisted Process. Plasma Processes and Polymers, 2015, 12, 545-554. | 3.0 | 53 |
| 97 | Co-electrolysis of H2O and CO2 on exsolved Ni nanoparticles for efficient syngas generation at controllable H2/CO ratios. Applied Catalysis B: Environmental, 2019, 258, 117950. | 20.2 | 53 |
| 98 | Diagnostics of the magnetized lowâ€pressure hydrogen plasma jet: Molecular regime. Journal of Applied Physics, 1996, 80, 1312-1324. | 2.5 | 52 |
| 99 | Symmetrical Exsolution of Rh Nanoparticles in Solid Oxide Cells for Efficient Syngas Production from Greenhouse Gases. ACS Catalysis, 2020, 10, 1278-1288. | 11.2 | 52 |
| 100 | Plasma chemistry during the deposition of a-C:H films and its influence on film properties. Diamond and Related Materials, 2003, 12, 90-97. | 3.9 | 51 |
| 101 | Smooth and Selfâ€Similar SiO<sub>2</sub>â€like Films on Polymers Synthesized in Rollâ€toâ€Roll Atmospheric Pressureâ€PECVD for Gas Diffusion Barrier Applications. Plasma Processes and Polymers, 2010, 7, 635-639. | 3.0 | 51 |
| 102 | Atomic layer deposition of Ru from CpRu(CO)2Et using O2 gas and O2 plasma. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2011, 29, . | 2.1 | 51 |
| 103 | Cross section for the mutual neutralization reactionH2++Hâ^', calculated in a multiple-crossing Landau-Zener approximation. Physical Review A, 1995, 51, 3362-3365. | 2.5 | 50 |
| 104 | Surface hydride composition of plasma deposited hydrogenated amorphous silicon: in situ infrared study of ion flux and temperature dependence. Surface Science, 2003, 530, 1-16. | 1.9 | 50 |
| 105 | Quasi-Ice Monolayer on Atomically Smooth AmorphousSiO2at Room Temperature Observed with a High-Finesse Optical Resonator. Physical Review Letters, 2005, 95, 166104. | 7.8 | 50 |
| 106 | Cavity ring down detection of SiH3 in a remote SiH4 plasma and comparison with model calculations and mass spectrometry. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2001, 19, 467-476. | 2.1 | 49 |
| 107 | Plasma-assisted atomic layer deposition of TiN/Al2O3 stacks for metal-oxide-semiconductor capacitor applications. Journal of Applied Physics, 2009, 106, . | 2.5 | 49 |
| 108 | Surface reaction probability during fast deposition of hydrogenated amorphous silicon with a remote silane plasma. Journal of Applied Physics, 2000, 87, 3313-3320. | 2.5 | 47 |

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| 109 | Abstraction of atomic hydrogen by atomic deuterium from an amorphous hydrogenated silicon surface. Journal of Chemical Physics, 2002, 117, 10805-10816. | 3.0 | 47 |
| 110 | Threshold ionization mass spectrometry of reactive species in remote Arâ•C2H2 expanding thermal plasma. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2005, 23, 1400-1412. | 2.1 | 46 |
| 111 | Atmospheric Pressure Barrier Discharge Deposition of Silica-Like Films on Polymeric Substrates. Plasma Processes and Polymers, 2007, 4, S440-S444. | 3.0 | 46 |
| 112 | High Quality SiO<sub>2</sub>â€like Layers by Large Area Atmospheric Pressure Plasma Enhanced CVD: Deposition Process Studies by Surface Analysis. Plasma Processes and Polymers, 2009, 6, 693-702. | 3.0 | 46 |
| 113 | Substrate Biasing during Plasma-Assisted ALD for Crystalline Phase-Control of TiO2 Thin Films. Electrochemical and Solid-State Letters, 2011, 15, G1-G3. | 2.2 | 46 |
| 114 | Characterization of plasma beam deposited amorphous hydrogenated silicon. Applied Physics Letters, 1995, 67, 491-493. | 3.3 | 45 |
| 115 | High-rate plasma-deposited SiO2 films for surface passivation of crystalline silicon. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2006, 24, 1823-1830. | 2.1 | 45 |
| 116 | Implications of thermo-chemical instability on the contracted modes in CO<sub>2</sub> microwave plasmas. Plasma Sources Science and Technology, 2020, 29, 025005. | 3.1 | 45 |
| 117 | Plasma Activated Electrochemical Ammonia Synthesis from Nitrogen and Water. ACS Energy Letters, 2021, 6, 313-319. | 17.4 | 44 |
| 118 | Oscillatory vapour shielding of liquid metal walls in nuclear fusion devices. Nature Communications, 2017, 8, 192. | 12.8 | 43 |
| 119 | Hydrogen poor cationic silicon clusters in an expanding argonâ€“hydrogenâ€“silane plasma. Applied Physics Letters, 1998, 72, 2397-2399. | 3.3 | 42 |
| 120 | The heating mechanism of electrons in the shock front of an expanding plasma. Plasma Sources Science and Technology, 1994, 3, 511-520. | 3.1 | 41 |
| 121 | Time-resolved cavity ringdown study of the Si and SiH3 surface reaction probability during plasma deposition of a-Si:H at different substrate temperatures. Journal of Applied Physics, 2004, 96, 4094-4106. | 2.5 | 41 |
| 122 | Electrochemical Activation of Atomic Layer-Deposited Cobalt Phosphate Electrocatalysts for Water Oxidation. ACS Catalysis, 2021, 11, 2774-2785. | 11.2 | 41 |
| 123 | Industrial high-rate (â¼45 nm/s) deposited silicon nitride yielding high-quality bulk and surface passivation under optimum anti-reflection coating conditions. Progress in Photovoltaics: Research Applications, 2005, 13, 705-716. | 8.1 | 40 |
| 124 | Real-time study of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>a</mml:mi><mml:mtext>â”</mml:mtext><mml:mi mathvariant="normal">Si</mml:mi><mml:mo>:</mml:mo><mml:mi mathvariant="normal">H</mml:mi><mml:mo>â•</mml:mo><mml:mi>c</mml:mi><mml:mtext>â”</mml:mtext><mml:mi mathvariant="normal">Si</mml:mi></mml:mrow></mml:math>heterointerface formation and epitaxial Si growth by spectroscopic ellipsometry, infrared spectroscopy, and second-harmonic generation. Phy | 3.2 | 40 |
| 125 | Surface Hydride Composition of Plasma-Synthesized Si Nanoparticles. Journal of Physical Chemistry C, 2011, 115, 20375-20379. | 3.1 | 40 |
| 126 | Nanostructuring of Iron Surfaces by Low-Energy Helium Ions. ACS Applied Materials & Interfaces, 2014, 6, 3462-3468. | 8.0 | 40 |

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| 127 | Quantum Magnetoconductance of a Nondegenerate Two-Dimensional Electron Gas. Europhysics Letters, 1988, 6, 75-80. | 2.0 | 39 |
| 128 | Production Mechanisms of NH and NH<sub>2</sub> Radicals in N<sub>2</sub>â^'H<sub>2</sub> Plasmas. Journal of Physical Chemistry A, 2007, 111, 11460-11472. | 2.5 | 39 |
| 129 | The atomic hydrogen flux to silicon growth flux ratio during microcrystalline silicon solar cell deposition. Applied Physics Letters, 2008, 93, 111914. | 3.3 | 39 |
| 130 | Surface Modifications Induced by High Fluxes of Low Energy Helium Ions. Scientific Reports, 2015, 5, 9779. | 3.3 | 39 |
| 131 | High-rate deposition of a-SiNx:H for photovoltaic applications by the expanding thermal plasma. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2002, 20, 1704-1715. | 2.1 | 38 |
| 132 | Optical second-harmonic generation in thin film systems. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2008, 26, 1519-1537. | 2.1 | 38 |
| 133 | Effect of ion bombardment on the a-Si:H based surface passivation of c-Si surfaces. Applied Physics Letters, 2011, 98, . | 3.3 | 38 |
| 134 | Quality improvement of plasma-beam-deposited amorphous hydrogenated carbon with higher growth rate. Plasma Sources Science and Technology, 1996, 5, 492-498. | 3.1 | 37 |
| 135 | Argon ion-induced dissociation of acetylene in an expanding Ar/C2H2 plasma. Applied Physics Letters, 1999, 74, 2927-2929. | 3.3 | 37 |
| 136 | Direct and highly sensitive measurement of defect-related absorption in amorphous silicon thin films by cavity ringdown spectroscopy. Applied Physics Letters, 2004, 84, 3079-3081. | 3.3 | 37 |
| 137 | The effect of ion-surface and ion-bulk interactions during hydrogenated amorphous silicon deposition. Journal of Applied Physics, 2007, 102, 073523. | 2.5 | 37 |
| 138 | Real time in situ spectroscopic ellipsometry of the growth and plasmonic properties of au nanoparticles on SiO2. Nano Research, 2012, 5, 513-520. | 10.4 | 37 |
| 139 | Four ways to determine the electron density in low-temperature plasmas. Physical Review E, 1994, 49, 2272-2275. | 2.1 | 36 |
| 140 | Ultrahigh throughput plasma processing of free standing silicon nanocrystals with lognormal size distribution. Journal of Applied Physics, 2013, 113, . | 2.5 | 36 |
| 141 | CO<sub>2</sub> Conversion in Nonuniform Discharges: Disentangling Dissociation and Recombination Mechanisms. Journal of Physical Chemistry C, 2020, 124, 16806-16819. | 3.1 | 36 |
| 142 | Stationary supersonic plasma expansion: continuum fluid mechanics versus direct simulation Monte Carlo method. Journal Physics D: Applied Physics, 2002, 35, 1362-1372. | 2.8 | 35 |
| 143 | Time-resolved cavity ring-down spectroscopic study of the gas phase and surface loss rates of Si and SiH3 plasma radicals. Chemical Physics Letters, 2002, 360, 189-193. | 2.6 | 35 |
| 144 | Plasma diagnostic study of silicon nitride film growth in a remote Arâ€“H2â€“N2â€“SiH4 plasma: Role of N and SiHn radicals. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2004, 22, 96-106. | 2.1 | 35 |

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| 145 | Atmospheric glow stabilization. Do we need pre-ionization?. Surface and Coatings Technology, 2005, 200, 46-50. | 4.8 | 35 |
| 146 | On the hexamethyldisiloxane dissociation paths in a remote Ar-fed expanding thermal plasma. Plasma Sources Science and Technology, 2006, 15, 421-431. | 3.1 | 35 |
| 147 | On the role of nanoporosity in controlling the performance of moisture permeation barrier layers. Microporous and Mesoporous Materials, 2014, 188, 163-171. | 4.4 | 35 |
| 148 | Insight into CO<sub>2</sub> Dissociation in Plasma from Numerical Solution of a Vibrational Diffusion Equation. Journal of Physical Chemistry C, 2017, 121, 19568-19576. | 3.1 | 35 |
| 149 | Plasma-Activated Electrolysis for Cogeneration of Nitric Oxide and Hydrogen from Water and Nitrogen. ACS Energy Letters, 2019, 4, 2091-2095. | 17.4 | 35 |
| 150 | Emission spectroscopy on a supersonically expanding argon/silane plasma. Journal of Applied Physics, 1992, 71, 4156-4163. | 2.5 | 34 |
| 151 | Effect of hydrogen on the growth of thin hydrogenated amorphous carbon films from thermal energy radicals. Applied Physics Letters, 2006, 88, 141922. | 3.3 | 34 |
| 152 | Accurate control of ion bombardment in remote plasmas using pulse-shaped biasing. Journal of Applied Physics, 2009, 106, 073303. | 2.5 | 34 |
| 153 | Fast deposition of amorphous carbon films by an expanding cascaded arc plasma jet. Journal of Applied Physics, 1995, 78, 528-540. | 2.5 | 33 |
| 154 | Temperature dependence of the surface reactivity of SiH3 radicals and the surface silicon hydride composition during amorphous silicon growth. Surface Science, 2003, 547, L865-L870. | 1.9 | 33 |
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