Joerg Rappich

List of Publications by Year
in descending order

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60	1,368	361413	345221
papers	citations	20 h-index	36 g-index

62	62	62	1954
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Radiation Hardness and Selfâ€Healing of Perovskite Solar Cells. Advanced Materials, 2016, 28, 8726-8731.	21.0	195
2	Unraveling the Lightâ€Induced Degradation Mechanisms of CH₃NH₃PbI₃ Perovskite Films. Advanced Electronic Materials, 2017, 3, 1700158.	5.1	130
3	Electronic Structure of Methoxy-, Bromo-, and Nitrobenzene Grafted onto Si(111). Journal of Physical Chemistry B, 2006, 110, 15432-15441.	2.6	89
4	Efficient minority carrier detrapping mediating the radiation hardness of triple-cation perovskite solar cells under proton irradiation. Energy and Environmental Science, 2019, 12, 1634-1647.	30.8	89
5	Time-Resolved Synchrotron XPS Monitoring of Irradiation-Induced Nitrobenzene Reduction for Chemical Lithography. Journal of Physical Chemistry B, 2007, 111, 7541-7549.	2.6	78
6	In Situ Infrared Ellipsometric Study of Stimuli-Responsive Mixed Polyelectrolyte Brushes. Analytical Chemistry, 2007, 79, 7676-7682.	6.5	54
7	In Situ Monitoring of Electrochemical Processes at the (100) pâ€Si/Aqueous â€‰NHâ€‰4â€‰Fâ€‰ Electrolyte Interface by Photoluminescence. Journal of the Electrochemical Society, 1997, 144, 493-496.	2.9	49
8	Reduced interface state density after photocurrent oscillations and electrochemical hydrogenation of nâ€Si(111): A surface photovoltage investigation. Applied Physics Letters, 1995, 66, 3018-3020.	3.3	47
9	Electronic Properties of Si Surfaces and Side Reactions during Electrochemical Grafting of Phenyl Layers. Journal of Physical Chemistry B, 2006, 110, 1332-1337.	2.6	41
10	Stability of grapheneâ€“silicon heterostructure solar cells. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 843-847.	1.8	36
11	Diffusion length of photo-generated charge carriers in layers and powders of CH3NH3PbI3 perovskite. Applied Physics Letters, 2016, 109, .	3.3	33
12	In situ study of nitrobenzene grafting on Si(111)-H surfaces by infrared spectroscopic ellipsometry. Electrochemistry Communications, 2009, 11, 2316-2319.	4.7	32
13	Preparation of a surface-grafted protein-selective polymer film by combined use of controlled/living radical photopolymerization and microcontact imprinting. Reactive and Functional Polymers, 2018, 125, 47-56.	4.1	29
14	Influence of the Grain Size on the Properties of CH₃NH₃PbI₃ Thin Films. ACS Applied Materials & Interfaces, 2017, 9, 38428-38435.	8.0	25
15	In Situ Infrared Spectroscopic Monitoring and Characterization of the Growth of Polydopamine (PDA) Films. Physica Status Solidi (B): Basic Research, 2019, 256, 1800308.	1.5	25
16	Analysis of biosensors by chemically specific optical techniques. Chemiluminescence-imaging and infrared spectroscopic mapping ellipsometry. Analytical and Bioanalytical Chemistry, 2007, 387, 1823-1829.	3.7	23
17	Polarization-Dependent and Ellipsometric Infrared Microscopy for Analysis of Anisotropic Thin Films. Journal of Physical Chemistry C, 2013, 117, 13557-13563.	3.1	22
18	Influence of the Para-Substitutent of Benzene Diazonium Salts and the Solvent on the Film Growth During Electrochemical Reduction. Zeitschrift Fur Physikalische Chemie, 2014, 228, 557-573.	2.8	22

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19	In situ monitoring of the electronic properties and the pH stability of grafted Si(111). Journal of Electroanalytical Chemistry, 2010, 646, 33-42.	3.8	20
20	Electrochemical functionalization of gold and silicon surfaces by a maleimide group as a biosensor for immunological application. Acta Biomaterialia, 2013, 9, 5838-5844.	8.3	20
21	Fast IR laser mapping ellipsometry for the study of functional organic thin films. Analyst, The, 2015, 140, 1791-1797.	3.5	19
22	Broadband infrared Mueller-matrix ellipsometry for studies of structured surfaces and thin films. Applied Optics, 2018, 57, 7895.	1.8	17
23	Etch Rates of Anodic Silicon Oxides in Dilute Fluoride Solutions. Journal of the Electrochemical Society, 2003, 150, B205.	2.9	15
24	A new strategy for the preparation of maleimide-functionalised gold surfaces. Electrochemistry Communications, 2010, 12, 1403-1406.	4.7	15
25	Functionalization of any substrate using covalently modified large area CVD graphene. Chemical Communications, 2017, 53, 9308-9311.	4.1	14
26	Quantifying the electrochemical maleimidation of large area graphene. Electrochemistry Communications, 2015, 57, 52-55.	4.7	12
27	In situ infrared ellipsometric monitoring of the growth process of polyaniline thin films and doping with poly(4-styrenesulfonate). Applied Surface Science, 2015, 344, 181-187.	6.1	12
28	Maleimide functionalized silicon surfaces for biosensing investigated by in-situ IRSE and EQCM. Electrochemistry Communications, 2015, 51, 103-107.	4.7	12
29	Energy-Level Alignment Tuning at Tetracene/c-Si Interfaces. Journal of Physical Chemistry C, 2020, 124, 27867-27881.	3.1	12
30	Recombination Behaviour at the Ultrathin Polypyrrole Film/Silicon Interface Investigated byIn-situPulsed Photoluminescence. Japanese Journal of Applied Physics, 2008, 47, 554-557.	1.5	11
31	Near-Ideal Complete Coverage of CD₃ onto Si(111) Surfaces Using One-Step Electrochemical Grafting: An IR Ellipsometry, Synchrotron XPS, and Photoluminescence Study. Journal of Physical Chemistry C, 2012, 116, 18684-18690.	3.1	11
32	Lightâ€Induced Defect Generation in CH 3 NH 3 PbI 3 Thin Films and Single Crystals. Solar Rrl, 2020, 4, 1900216.	5.8	11
33	Strongly Reduced Si Surface Recombination by Charge Injection during Etching in Diluted HF/HNO₃. ChemPhysChem, 2012, 13, 2982-2988.	2.1	10
34	Fabrication and Characterization of Surfaces Modified with Carboxymethylthio Ligands for Chelate-Assisted Trapping of Copper. ACS Applied Materials & Interfaces, 2017, 9, 24273-24281.	8.0	10
35	Creation and annealing of metastable defect states in CH3NH3PbI3 at low temperatures. Applied Physics Letters, 2018, 112, .	3.3	10
36	Sensing and structure analysis by in situ IR spectroscopy: from mL flow cells to microfluidic applications. Journal of Physics Condensed Matter, 2020, 32, 393002.	1.8	10

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37	Electrochemical passivation of Si and SiGe surfaces. Thin Films, 2002, 29, 135-259.	0.1	9
38	Surface Functionalization toward Biosensing via Free-Standing Siâ€“OH Bonds on Nonoxidized Silicon Surfaces. ACS Applied Materials & Interfaces, 2019, 11, 31434-31440.	8.0	9
39	In-Situ Monitoring the Growth of Polypyrrole Films at Liquid/Solid Interface Using a Combination of Polarized Infrared Spectroscopy and Reflectance Anisotropy Spectroscopy. Journal of the Electrochemical Society, 2012, 159, H811-H815.	2.9	8
40	Hyperspectral infrared laser polarimetry for single-shot phaseâ€“amplitude imaging of thin films. Optics Letters, 2019, 44, 4893.	3.3	8
41	Combined first-principles statistical mechanics approach to sulfur structure in organic cathode hosts for polymer based lithiumâ€“sulfur (Liâ€“S) batteries. Physical Chemistry Chemical Physics, 2021, 23, 26709-26720.	2.8	8
42	In Situ PL and SPV Monitored Charge Carrier Injection During Metal Assisted Etching of Intrinsic a-Si Layers on c-Si. ACS Applied Materials & Interfaces, 2015, 7, 11654-11659.	8.0	7
43	Passivation of Si surfaces by hydrogen and organic molecules investigated by in-situ photoluminescence techniques. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 210-213.	0.8	6
44	Photoluminescence and surface photovoltage of ethynyl derivative-terminated Si(111) surfaces. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 161-164.	0.8	6
45	Infrared spectroscopic study of the amidation reaction of aminophenyl modified Au surfaces and p-nitrobenzoic acid as model system. Physical Chemistry Chemical Physics, 2010, 12, 12427.	2.8	6
46	Ultrasensitive broadband infrared 4â€‰Ã—â€‰4 Mueller-matrix ellipsometry for studies of depolarizing and anisotropic thin films. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2020, 38, .	1.2	6
47	Non-radiative recombination at reconstructed Si surfaces. Solid-State Electronics, 2002, 46, 1863-1872.	1.4	5
48	Temperature Dependent Diffusion of DMSO in CH₃NH₃PbI₃ Precursor Films During Layer Formation and Impact on Solar Cells. ACS Applied Energy Materials, 2019, 2, 5116-5123.	5.1	5
49	Etching of a-Si:H on c-Si absorber monitored by in situ photoluminescence measurements. Energy Procedia, 2011, 8, 269-274.	1.8	4
50	Characterization of a new maleimido functionalization of gold for surface plasmon resonance spectroscopy. Journal of Molecular Recognition, 2014, 27, 707-713.	2.1	4
51	Electrochemical Modification of Large Area Graphene and Characterization by Vibrational Spectroscopy. , 2018, , 80-94.		4
52	Wet-Chemical Conditioning of Silicon Substrates for a-Si:H/c-Si Heterojunctions. Engineering Materials, 2012, , 45-94.	0.6	3
53	In Situ Monitoring of the Electrochemical Surface Modification by Thin Organic Layers. Series on Chemistry, Energy and the Environment, 2018, , 205-255.	0.3	2
54	Fast Optical Reflectance Measurements during Spin Coating and Annealing of Organicâ€“Inorganic Perovskite Precursor Solutions. Physica Status Solidi (B): Basic Research, 2021, 258, 2000479.	1.5	2

#	Article	IF	Citations
55	Application of In-Situ IR-Ellipsometry in Silicon Electrochemistry to Study Ultrathin Films. Springer Series in Surface Sciences, 2018, , 459-479.	0.3	1
56	Determination of residual dimethyl sulfoxide by high-resolution continuum source graphite furnace molecular absorption spectrometry. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2021, 177, 106050.	2.9	1
57	Characterization of Thin Organic Films with Surface-Sensitive FTIR Spectroscopy. Springer Series in Surface Sciences, 2014, , 305-324.	0.3	1
58	Application of In-situ IR-Ellipsometry in Electrochemistry to Study Ultra-Thin Films. Springer Series in Surface Sciences, 2014, , 287-302.	0.3	1
59	IR microfluidics for in situ sensing of molecular interfaces. , 2022, , .		1
60	Characterization of Thin Organic Films with Surface-Sensitive FTIR Spectroscopy. Springer Series in Surface Sciences, 2018, , 483-503.	0.3	0