

# Joerg Rappich

## List of Publications by Year in descending order

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Version: 2024-02-01

60  
papers

1,368  
citations

361413

20  
h-index

345221

36  
g-index

62  
all docs

62  
docs citations

62  
times ranked

1954  
citing authors

#	ARTICLE	IF	CITATIONS
1	IR microfluidics for in situ sensing of molecular interfaces. , 2022, , .		1
2	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
3	Fast Optical Reflectance Measurements during Spin Coating and Annealing of Organic-Inorganic Perovskite Precursor Solutions. Physica Status Solidi (B): Basic Research, 2021, 258, 2000479.	1.5	2
4	Combined first-principles statistical mechanics approach to sulfur structure in organic cathode hosts for polymer based lithium-sulfur (Li-S) batteries. Physical Chemistry Chemical Physics, 2021, 23, 26709-26720.	2.8	8
5	Light-Induced Defect Generation in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Thin Films and Single Crystals. Solar Rrl, 2020, 4, 1900216.	5.8	11
6	Ultrasensitive broadband infrared 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
7	Energy-Level Alignment Tuning at Tetracene/c-Si Interfaces. Journal of Physical Chemistry C, 2020, 124, 27867-27881.	3.1	12
8	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
9	Surface Functionalization toward Biosensing via Free-Standing Si-OH Bonds on Nonoxidized Silicon Surfaces. ACS Applied Materials & Interfaces, 2019, 11, 31434-31440.	8.0	9
10	Temperature Dependent Diffusion of DMSO in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Precursor Films During Layer Formation and Impact on Solar Cells. ACS Applied Energy Materials, 2019, 2, 5116-5123.	5.1	5
11	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
12	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
13	Hyperspectral infrared laser polarimetry for single-shot phase-amplitude imaging of thin films. Optics Letters, 2019, 44, 4893.	3.3	8
14	Creation and annealing of metastable defect states in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> at low temperatures. Applied Physics Letters, 2018, 112, .	3.3	10
15	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
16	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
17	Electrochemical Modification of Large Area Graphene and Characterization by Vibrational Spectroscopy. , 2018, , 80-94.		4
18	Broadband infrared Mueller-matrix ellipsometry for studies of structured surfaces and thin films. Applied Optics, 2018, 57, 7895.	1.8	17

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19	Application of In-Situ IR-Ellipsometry in Silicon Electrochemistry to Study Ultrathin Films. Springer Series in Surface Sciences, 2018, , 459-479.	0.3	1
20	Characterization of Thin Organic Films with Surface-Sensitive FTIR Spectroscopy. Springer Series in Surface Sciences, 2018, , 483-503.	0.3	0
21	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
22	Influence of the Grain Size on the Properties of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Thin Films. ACS Applied Materials & Interfaces, 2017, 9, 38428-38435.	8.0	25
23	Unraveling the Light-Induced Degradation Mechanisms of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Films. Advanced Electronic Materials, 2017, 3, 1700158.	5.1	130
24	Functionalization of any substrate using covalently modified large area CVD graphene. Chemical Communications, 2017, 53, 9308-9311.	4.1	14
25	Diffusion length of photo-generated charge carriers in layers and powders of CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite. Applied Physics Letters, 2016, 109, .	3.3	33
26	Radiation Hardness and Self-Healing of Perovskite Solar Cells. Advanced Materials, 2016, 28, 8726-8731.	21.0	195
27	Fast IR laser mapping ellipsometry for the study of functional organic thin films. Analyst, The, 2015, 140, 1791-1797.	3.5	19
28	Quantifying the electrochemical maleimidation of large area graphene. Electrochemistry Communications, 2015, 57, 52-55.	4.7	12
29	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
30	<i>In Situ</i> 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
31	Maleimide functionalized silicon surfaces for biosensing investigated by in-situ IRSE and EQCM. Electrochemistry Communications, 2015, 51, 103-107.	4.7	12
32	Stability of graphene-silicon heterostructure solar cells. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 843-847.	1.8	36
33	Characterization of a new maleimido functionalization of gold for surface plasmon resonance spectroscopy. Journal of Molecular Recognition, 2014, 27, 707-713.	2.1	4
34	Influence of the Para-Substituent 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
35	Characterization of Thin Organic Films with Surface-Sensitive FTIR Spectroscopy. Springer Series in Surface Sciences, 2014, , 305-324.	0.3	1
36	Application of In-situ IR-Ellipsometry in Electrochemistry to Study Ultra-Thin Films. Springer Series in Surface Sciences, 2014, , 287-302.	0.3	1

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37	Electrochemical functionalization of gold and silicon surfaces by a maleimide group as a biosensor for immunological application. <i>Acta Biomaterialia</i> , 2013, 9, 5838-5844.	8.3	20
38	Polarization-Dependent and Ellipsometric Infrared Microscopy for Analysis of Anisotropic Thin Films. <i>Journal of Physical Chemistry C</i> , 2013, 117, 13557-13563.	3.1	22
39	In-Situ Monitoring the Growth of Polypyrrole Films at Liquid/Solid Interface Using a Combination of Polarized Infrared Spectroscopy and Reflectance Anisotropy Spectroscopy. <i>Journal of the Electrochemical Society</i> , 2012, 159, H811-H815.	2.9	8
40	Wet-Chemical Conditioning of Silicon Substrates for a-Si:H/c-Si Heterojunctions. <i>Engineering Materials</i> , 2012, , 45-94.	0.6	3
41	Near-Ideal Complete Coverage of CD <sub>3</sub> onto Si(111) Surfaces Using One-Step Electrochemical Grafting: An IR Ellipsometry, Synchrotron XPS, and Photoluminescence Study. <i>Journal of Physical Chemistry C</i> , 2012, 116, 18684-18690.	3.1	11
42	Strongly Reduced Si Surface Recombination by Charge Injection during Etching in Diluted HF/HNO <sub>3</sub> . <i>ChemPhysChem</i> , 2012, 13, 2982-2988.	2.1	10
43	Etching of a-Si:H on c-Si absorber monitored by in situ photoluminescence measurements. <i>Energy Procedia</i> , 2011, 8, 269-274.	1.8	4
44	In situ monitoring of the electronic properties and the pH stability of grafted Si(111). <i>Journal of Electroanalytical Chemistry</i> , 2010, 646, 33-42.	3.8	20
45	A new strategy for the preparation of maleimide-functionalised gold surfaces. <i>Electrochemistry Communications</i> , 2010, 12, 1403-1406.	4.7	15
46	Passivation of Si surfaces by hydrogen and organic molecules investigated by in-situ photoluminescence techniques. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010, 7, 210-213.	0.8	6
47	Photoluminescence and surface photovoltage of ethynyl derivative-terminated Si(111) surfaces. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010, 7, 161-164.	0.8	6
48	Infrared spectroscopic study of the amidation reaction of aminophenyl modified Au surfaces and p-nitrobenzoic acid as model system. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 12427.	2.8	6
49	In situ study of nitrobenzene grafting on Si(111)-H surfaces by infrared spectroscopic ellipsometry. <i>Electrochemistry Communications</i> , 2009, 11, 2316-2319.	4.7	32
50	Recombination Behaviour at the Ultrathin Polypyrrole Film/Silicon Interface Investigated by In-situ Pulsed Photoluminescence. <i>Japanese Journal of Applied Physics</i> , 2008, 47, 554-557.	1.5	11
51	Time-Resolved Synchrotron XPS Monitoring of Irradiation-Induced Nitrobenzene Reduction for Chemical Lithography. <i>Journal of Physical Chemistry B</i> , 2007, 111, 7541-7549.	2.6	78
52	In Situ Infrared Ellipsometric Study of Stimuli-Responsive Mixed Polyelectrolyte Brushes. <i>Analytical Chemistry</i> , 2007, 79, 7676-7682.	6.5	54
53	Analysis of biosensors by chemically specific optical techniques. Chemiluminescence-imaging and infrared spectroscopic mapping ellipsometry. <i>Analytical and Bioanalytical Chemistry</i> , 2007, 387, 1823-1829.	3.7	23
54	Electronic Properties of Si Surfaces and Side Reactions during Electrochemical Grafting of Phenyl Layers. <i>Journal of Physical Chemistry B</i> , 2006, 110, 1332-1337.	2.6	41

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55	Electronic Structure of Methoxy-, Bromo-, and Nitrobenzene Grafted onto Si(111). Journal of Physical Chemistry B, 2006, 110, 15432-15441.	2.6	89
56	Etch Rates of Anodic Silicon Oxides in Dilute Fluoride Solutions. Journal of the Electrochemical Society, 2003, 150, B205.	2.9	15
57	Electrochemical passivation of Si and SiGe surfaces. Thin Films, 2002, 29, 135-259.	0.1	9
58	Non-radiative recombination at reconstructed Si surfaces. Solid-State Electronics, 2002, 46, 1863-1872.	1.4	5
59	In Situ Monitoring of Electrochemical Processes at the (100) p-Si/Aqueous NH <sub>4</sub> F Electrolyte Interface by Photoluminescence. Journal of the Electrochemical Society, 1997, 144, 493-496.	2.9	49
60	Reduced interface state density after photocurrent oscillations and electrochemical hydrogenation of n-Si(111): A surface photovoltage investigation. Applied Physics Letters, 1995, 66, 3018-3020.	3.3	47