

Roald M Tiggelaar

List of Publications by Year in descending order

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Version: 2024-02-01

59
papers

1,595
citations

304743

22
h-index

315739

38
g-index

61
all docs

61
docs citations

61
times ranked

2504
citing authors

#	ARTICLE	IF	CITATIONS
1	Massively parallel sequencing techniques for forensics: A review. <i>Electrophoresis</i> , 2018, 39, 2642-2654.	2.4	126
2	Spatial decoupling of light absorption and catalytic activity of Ni-Mo-loaded high-aspect-ratio silicon microwire photocathodes. <i>Nature Energy</i> , 2018, 3, 185-192.	39.5	118
3	Fabrication, mechanical testing and application of high-pressure glass microreactor chips. <i>Chemical Engineering Journal</i> , 2007, 131, 163-170.	12.7	117
4	Microfluidic Devices for Forensic DNA Analysis: A Review. <i>Biosensors</i> , 2016, 6, 41.	4.7	107
5	A Brush-Gel/Metal-Nanoparticle Hybrid Film as an Efficient Supported Catalyst in Glass Microreactors. <i>Chemistry - A European Journal</i> , 2010, 16, 12406-12411.	3.3	77
6	The Extraction and Recovery Efficiency of Pure DNA for Different Types of Swabs. <i>Journal of Forensic Sciences</i> , 2018, 63, 1492-1499.	1.6	74
7	Room-temperature intermediate layer bonding for microfluidic devices. <i>Lab on A Chip</i> , 2009, 9, 3481.	6.0	65
8	Fabrication and Doping Methods for Silicon Nano- and Micropillar Arrays for Solar Cell Applications: A Review. <i>Advanced Materials</i> , 2015, 27, 6781-6796.	21.0	60
9	Substantial rate enhancements of the esterification reaction of phthalic anhydride with methanol at high pressure and using supercritical CO ₂ as a co-solvent in a glass microreactor. <i>Lab on A Chip</i> , 2007, 7, 1345.	6.0	55
10	A light detection cell to be used in a micro analysis system for ammonia. <i>Talanta</i> , 2002, 56, 331-339.	5.5	41
11	Fabrication and characterization of high-temperature microreactors with thin film heater and sensor patterns in silicon nitride tubes. <i>Lab on A Chip</i> , 2005, 5, 326.	6.0	40
12	Bacterial viability on chemically modified silicon nanowire arrays. <i>Journal of Materials Chemistry B</i> , 2016, 4, 3104-3112.	5.8	37
13	Continuous Flow ¹ H and ¹³ C NMR Spectroscopy in Microfluidic Stripline NMR Chips. <i>Analytical Chemistry</i> , 2017, 89, 2296-2303.	6.5	34
14	Efficient and Stable Silicon Microwire Photocathodes with a Nickel Silicide Interlayer for Operation in Strongly Alkaline Solutions. <i>ACS Energy Letters</i> , 2018, 3, 1086-1092.	17.4	33
15	Gas-liquid dynamics at low Reynolds numbers in pillared rectangular micro channels. <i>Microfluidics and Nanofluidics</i> , 2010, 9, 131-144.	2.2	32
16	Characterization of porous silicon integrated in liquid chromatography chips. <i>Lab on A Chip</i> , 2009, 9, 456-463.	6.0	30
17	Column coupling isotachopheresis-capillary electrophoresis with mass spectrometric detection: Characterization and optimization of microfluidic interfaces. <i>Journal of Chromatography A</i> , 2013, 1297, 204-212.	3.7	28
18	Glucose level determination with a multi-enzymatic cascade reaction in a functionalized glass chip. <i>Analyst</i> , 2013, 138, 5019.	3.5	28

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19	Cyclic Olefin Copolymer Microfluidic Devices for Forensic Applications. <i>Biosensors</i> , 2019, 9, 85.	4.7	28
20	Large-scale fabrication of highly ordered sub-20 nm noble metal nanoparticles on silica substrates without metallic adhesion layers. <i>Microsystems and Nanoengineering</i> , 2018, 4, 4.	7.0	24
21	Analysis systems for the detection of ammonia based on micromachined components modular hybrid versus monolithic integrated approach. <i>Sensors and Actuators B: Chemical</i> , 2003, 92, 25-36.	7.8	23
22	Controlled Doping Methods for Radial p/n Junctions in Silicon. <i>Advanced Energy Materials</i> , 2015, 5, 1401745.	19.5	23
23	Shrinkage Control of Photoresist for Large Area Fabrication of Sub-30 nm Periodic Nanocolumns. <i>Advanced Materials Technologies</i> , 2017, 2, 1600238.	5.8	23
24	High-throughput activity screening and sorting of single catalyst particles with a droplet microreactor using dielectrophoresis. <i>Nature Catalysis</i> , 2021, 4, 1070-1079.	34.4	23
25	Effects of Pillar Height and Junction Depth on the Performance of Radially Doped Silicon Pillar Arrays for Solar Energy Applications. <i>Advanced Energy Materials</i> , 2016, 6, 1501728.	19.5	20
26	Flow of CO ₂ -ethanol and of CO ₂ -methanol in a non-adiabatic microfluidic T-junction at high pressures. <i>Microfluidics and Nanofluidics</i> , 2012, 12, 927-940.	2.2	17
27	3D Fractals as SERS Active Platforms: Preparation and Evaluation for Gas Phase Detection of G-Nerve Agents. <i>Micromachines</i> , 2018, 9, 60.	2.9	17
28	A Stand-Alone Si-Based Porous Photoelectrochemical Cell. <i>Advanced Energy Materials</i> , 2019, 9, 1803548.	19.5	17
29	Spreading of thin-film metal patterns deposited on nonplanar surfaces using a shadow mask micromachined in Si (110). <i>Journal of Vacuum Science & Technology B</i> , 2007, 25, 1207.	1.3	16
30	Electrical properties of low pressure chemical vapor deposited silicon nitride thin films for temperatures up to 650 °C. <i>Journal of Applied Physics</i> , 2009, 105, .	2.5	16
31	Postdeposition UV-Ozone Treatment: An Enabling Technique to Enhance the Direct Adhesion of Gold Thin Films to Oxidized Silicon. <i>ACS Nano</i> , 2019, 13, 6782-6789.	14.6	16
32	Morphology of single picosecond pulse subsurface laser-induced modifications of sapphire and subsequent selective etching. <i>Optics Express</i> , 2018, 26, 29283.	3.4	16
33	Fluorescent cyanine dyes for the quantification of low amounts of dsDNA. <i>Analytical Biochemistry</i> , 2016, 511, 74-79.	2.4	15
34	Spatially resolved spectroscopy using tapered stripline NMR. <i>Journal of Magnetic Resonance</i> , 2016, 263, 136-146.	2.1	15
35	Spatioselective Electrochemical and Photoelectrochemical Functionalization of Silicon Microwires with Axial p/n Junctions. <i>Advanced Materials</i> , 2016, 28, 1400-1405.	21.0	14
36	Unraveling the growth of vertically aligned multi-walled carbon nanotubes by chemical vapor deposition. <i>Materials Research Express</i> , 2014, 1, 045604.	1.6	13

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37	An All-Glass Microfluidic Network with Integrated Amorphous Silicon Photosensors for on-Chip Monitoring of Enzymatic Biochemical Assay. <i>Biosensors</i> , 2017, 7, 58.	4.7	11
38	3D-fabrication of tunable and high-density arrays of crystalline silicon nanostructures. <i>Journal of Micromechanics and Microengineering</i> , 2018, 28, 044003.	2.6	11
39	A Microfluidic Approach for Biosensing DNA within Forensics. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 7067.	2.5	10
40	Temperature Dependence of the 1727 cm^{-1} Interstitial Oxygen Absorption Band Studied by Attenuated Total Internal Reflection Infrared Spectroscopy in a Newly Developed Microreactor. <i>Journal of Physical Chemistry C</i> , 2013, 117, 21936-21942.	3.1	9
41	In-line sample concentration by evaporation through porous hollow fibers and micromachined membranes embedded in microfluidic devices. <i>Electrophoresis</i> , 2016, 37, 463-471.	2.4	9
42	Fabrication of integrated porous glass for microfluidic applications. <i>Lab on A Chip</i> , 2013, 13, 3061.	6.0	8
43	CO Adsorption on Pt Nanoparticles in Low E-Fields Studied by ATR-IR Spectroscopy in a Microreactor. <i>Journal of Physical Chemistry C</i> , 2015, 119, 24887-24894.	3.1	8
44	Photo-Electrical Characterization of Silicon Micropillar Arrays with Radial p/n Junctions Containing Passivation and Anti-Reflection Coatings. <i>Advanced Energy Materials</i> , 2017, 7, 1601497.	19.5	8
45	Bacterial Footprints in Elastic Pillared Microstructures. <i>ACS Applied Bio Materials</i> , 2018, 1, 1294-1300.	4.6	8
46	FDA authorized molecular point-of-care SARS-CoV-2 tests: A critical review on principles, systems and clinical performances. <i>Biosensors and Bioelectronics: X</i> , 2022, 11, 100158.	1.7	8
47	Displacement Talbot lithography nanopatterned microsieve array for directional neuronal network formation in brain-on-chip. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2016, 34, .	1.2	7
48	Fabrication and characterization of microsieve electrode array (μSEA) enabling cell positioning on 3D electrodes. <i>Journal of Micromechanics and Microengineering</i> , 2017, 27, 015017.	2.6	7
49	Three-Dimensional Fractal Geometry for Gas Permeation in Microchannels. <i>Micromachines</i> , 2018, 9, 45.	2.9	6
50	Dataset of the absorption, emission and excitation spectra and fluorescence intensity graphs of fluorescent cyanine dyes for the quantification of low amounts of dsDNA. <i>Data in Brief</i> , 2017, 10, 132-143.	1.0	5
51	Single catalyst particle diagnostics in a microreactor for performing multiphase hydrogenation reactions. <i>Faraday Discussions</i> , 2021, 229, 267-280.	3.2	5
52	On the Improvement of Alveolar-Like Microfluidic Devices for Efficient Blood Oxygenation. <i>Advanced Materials Technologies</i> , 2021, 6, 2001027.	5.8	5
53	Wafer-scale fabrication and modification of silicon nano-pillar arrays for nanoelectronics, nanofluidics and beyond. <i>International Journal of Nanotechnology</i> , 2020, 17, 583.	0.2	4
54	Effect of Local Topography on Cell Division of <i>Staphylococcus</i> spp.. <i>Nanomaterials</i> , 2022, 12, 683.	4.1	4

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55	Local deposition and patterning of catalytic thin films in microsystems. Journal of Micromechanics and Microengineering, 2012, 22, 045023.	2.6	3
56	Synthesis and Characterization of Boron Thin Films Using Chemical and Physical Vapor Depositions. Coatings, 2022, 12, 685.	2.6	3
57	A factorial design approach to fracture pressure tests of microfluidic BF33 and D263T glass chips with side-port capillary connections. Journal of Micromechanics and Microengineering, 2019, 29, 035011.	2.6	1
58	A Self-Aligned Wafer-Scale Gate-All-Around Aperture Definition Method for Silicon Nanostructures. , 2022, , .		1
59	Portable Optoelectronic System for Monitoring Enzymatic Chemiluminescent Reaction. Lecture Notes in Electrical Engineering, 2019, , 189-194.	0.4	0