

Roald M Tiggelaar

List of Publications by Year in descending order

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59
papers

1,595
citations

304743

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docs citations

61
times ranked

2504
citing authors

#	ARTICLE	IF	CITATIONS
1	A Self-Aligned Wafer-Scale Gate-All-Around Aperture Definition Method for Silicon Nanostructures. , 2022, , .		1
2	Effect of Local Topography on Cell Division of Staphylococcus spp.. Nanomaterials, 2022, 12, 683.	4.1	4
3	Synthesis and Characterization of Boron Thin Films Using Chemical and Physical Vapor Depositions. Coatings, 2022, 12, 685.	2.6	3
4	FDA authorized molecular point-of-care SARS-CoV-2 tests: A critical review on principles, systems and clinical performances. Biosensors and Bioelectronics: X, 2022, 11, 100158.	1.7	8
5	Single catalyst particle diagnostics in a microreactor for performing multiphase hydrogenation reactions. Faraday Discussions, 2021, 229, 267-280.	3.2	5
6	On the Improvement of Alveolar-Like Microfluidic Devices for Efficient Blood Oxygenation. Advanced Materials Technologies, 2021, 6, 2001027.	5.8	5
7	High-throughput activity screening and sorting of single catalyst particles with a droplet microreactor using dielectrophoresis. Nature Catalysis, 2021, 4, 1070-1079.	34.4	23
8	A Microfluidic Approach for Biosensing DNA within Forensics. Applied Sciences (Switzerland), 2020, 10, 7067.	2.5	10
9	Wafer-scale fabrication and modification of silicon nano-pillar arrays for nanoelectronics, nanofluidics and beyond. International Journal of Nanotechnology, 2020, 17, 583.	0.2	4
10	Cyclic Olefin Copolymer Microfluidic Devices for Forensic Applications. Biosensors, 2019, 9, 85.	4.7	28
11	Portable Optoelectronic System for Monitoring Enzymatic Chemiluminescent Reaction. Lecture Notes in Electrical Engineering, 2019, , 189-194.	0.4	0
12	Postdeposition UV-Ozone Treatment: An Enabling Technique to Enhance the Direct Adhesion of Gold Thin Films to Oxidized Silicon. ACS Nano, 2019, 13, 6782-6789.	14.6	16
13	A Stand-Alone Si-Based Porous Photoelectrochemical Cell. Advanced Energy Materials, 2019, 9, 1803548.	19.5	17
14	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
15	Efficient and Stable Silicon Microwire Photocathodes with a Nickel Silicide Interlayer for Operation in Strongly Alkaline Solutions. ACS Energy Letters, 2018, 3, 1086-1092.	17.4	33
16	3D-fabrication of tunable and high-density arrays of crystalline silicon nanostructures. Journal of Micromechanics and Microengineering, 2018, 28, 044003.	2.6	11
17	Spatial decoupling of light absorption and catalytic activity of Ni-Mo-loaded high-aspect-ratio silicon microwire photocathodes. Nature Energy, 2018, 3, 185-192.	39.5	118
18	Large-scale fabrication of highly ordered sub-20-nm noble metal nanoparticles on silica substrates without metallic adhesion layers. Microsystems and Nanoengineering, 2018, 4, 4.	7.0	24

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19	Bacterial Footprints in Elastic Pillared Microstructures. <i>ACS Applied Bio Materials</i> , 2018, 1, 1294-1300.	4.6	8
20	Three-Dimensional Fractal Geometry for Gas Permeation in Microchannels. <i>Micromachines</i> , 2018, 9, 45.	2.9	6
21	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
22	Massively parallel sequencing techniques for forensics: A review. <i>Electrophoresis</i> , 2018, 39, 2642-2654.	2.4	126
23	The Extraction and Recovery Efficiency of Pure <sc>DNA</sc> for Different Types of Swabs. <i>Journal of Forensic Sciences</i> , 2018, 63, 1492-1499.	1.6	74
24	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
25	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
26	Continuous Flow ¹H and ¹³C NMR Spectroscopy in Microfluidic Stripline NMR Chips. <i>Analytical Chemistry</i> , 2017, 89, 2296-2303.	6.5	34
27	Fabrication and characterization of microsieve electrode array (<i>μ</i>SEA) enabling cell positioning on 3D electrodes. <i>Journal of Micromechanics and Microengineering</i> , 2017, 27, 015017.	2.6	7
28	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
29	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
30	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
31	Microfluidic Devices for Forensic DNA Analysis: A Review. <i>Biosensors</i> , 2016, 6, 41.	4.7	107
32	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
33	Spatioselective Electrochemical and Photoelectrochemical Functionalization of Silicon Microwires with Axial p/n Junctions. <i>Advanced Materials</i> , 2016, 28, 1400-1405.	21.0	14
34	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
35	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
36	Fluorescent cyanine dyes for the quantification of low amounts of dsDNA. <i>Analytical Biochemistry</i> , 2016, 511, 74-79.	2.4	15

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37	Spatially resolved spectroscopy using tapered stripline NMR. Journal of Magnetic Resonance, 2016, 263, 136-146.	2.1	15
38	Bacterial viability on chemically modified silicon nanowire arrays. Journal of Materials Chemistry B, 2016, 4, 3104-3112.	5.8	37
39	CO Adsorption on Pt Nanoparticles in Low E-Fields Studied by ATR-IR Spectroscopy in a Microreactor. Journal of Physical Chemistry C, 2015, 119, 24887-24894.	3.1	8
40	Fabrication and Doping Methods for Silicon Nano- and Micropillar Arrays for Solar Cell Applications: A Review. Advanced Materials, 2015, 27, 6781-6796.	21.0	60
41	Controlled Doping Methods for Radial p/n Junctions in Silicon. Advanced Energy Materials, 2015, 5, 1401745.	19.5	23
42	Unraveling the growth of vertically aligned multi-walled carbon nanotubes by chemical vapor deposition. Materials Research Express, 2014, 1, 045604.	1.6	13
43	Temperature Dependence of the 1727 cm^{-1} Interstitial Oxygen Absorption Band Studied by Attenuated Total Internal Reflection Infrared Spectroscopy in a Newly Developed Microreactor. Journal of Physical Chemistry C, 2013, 117, 21936-21942.	3.1	9
44	Column coupling isotachopheresis capillary electrophoresis with mass spectrometric detection: Characterization and optimization of microfluidic interfaces. Journal of Chromatography A, 2013, 1297, 204-212.	3.7	28
45	Glucose level determination with a multi-enzymatic cascade reaction in a functionalized glass chip. Analyst, The, 2013, 138, 5019.	3.5	28
46	Fabrication of integrated porous glass for microfluidic applications. Lab on A Chip, 2013, 13, 3061.	6.0	8
47	Local deposition and patterning of catalytic thin films in microsystems. Journal of Micromechanics and Microengineering, 2012, 22, 045023.	2.6	3
48	Flow of CO_2 -ethanol and of CO_2 -methanol in a non-adiabatic microfluidic T-junction at high pressures. Microfluidics and Nanofluidics, 2012, 12, 927-940.	2.2	17
49	Gas-liquid dynamics at low Reynolds numbers in pillared rectangular micro channels. Microfluidics and Nanofluidics, 2010, 9, 131-144.	2.2	32
50	A Brush-Gel/Metal-Nanoparticle Hybrid Film as an Efficient Supported Catalyst in Glass Microreactors. Chemistry - A European Journal, 2010, 16, 12406-12411.	3.3	77
51	Electrical properties of low pressure chemical vapor deposited silicon nitride thin films for temperatures up to 650 $^{\circ}\text{C}$. Journal of Applied Physics, 2009, 105, .	2.5	16
52	Room-temperature intermediate layer bonding for microfluidic devices. Lab on A Chip, 2009, 9, 3481.	6.0	65
53	Characterization of porous silicon integrated in liquid chromatography chips. Lab on A Chip, 2009, 9, 456-463.	6.0	30
54	Spreading of thin-film metal patterns deposited on nonplanar surfaces using a shadow mask micromachined in Si (110). Journal of Vacuum Science & Technology B, 2007, 25, 1207.	1.3	16

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55	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. Lab on A Chip, 2007, 7, 1345.	6.0	55
56	Fabrication, mechanical testing and application of high-pressure glass microreactor chips. Chemical Engineering Journal, 2007, 131, 163-170.	12.7	117
57	Fabrication and characterization of high-temperature microreactors with thin film heater and sensor patterns in silicon nitride tubes. Lab on A Chip, 2005, 5, 326.	6.0	40
58	Analysis systems for the detection of ammonia based on micromachined components modular hybrid versus monolithic integrated approach. Sensors and Actuators B: Chemical, 2003, 92, 25-36.	7.8	23
59	A light detection cell to be used in a micro analysis system for ammonia. Talanta, 2002, 56, 331-339.	5.5	41