

# Alexander Aerts

## List of Publications by Year in descending order

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70  
papers

2,070  
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257450

24  
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74  
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74  
docs citations

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times ranked

2413  
citing authors

#	ARTICLE	IF	CITATIONS
1	Synthesis and Characterization of Stable Monodisperse Silica Nanoparticle Sols for <i>in Vitro</i> Cytotoxicity Testing. <i>Langmuir</i> , 2010, 26, 328-335.	3.5	137
2	Direct Observation of Molecular-Level Template Action Leading to Self-Assembly of a Porous Framework. <i>Chemistry - A European Journal</i> , 2010, 16, 3926-3932.	3.3	106
3	Methods for in situ spectroscopic probing of the synthesis of a zeolite. <i>Chemical Society Reviews</i> , 2010, 39, 4626.	38.1	94
4	Tiling Silicalite-1 Nanoslabs into 3D Mosaics. <i>Advanced Materials</i> , 2003, 15, 1705-1707.	21.0	90
5	Combined NMR, SAXS, and DLS Study of Concentrated Clear Solutions Used in Silicalite-1 Zeolite Synthesis. <i>Chemistry of Materials</i> , 2007, 19, 3448-3454.	6.7	82
6	Change in silica sources in Roman and post-Roman glass. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2003, 58, 659-667.	2.9	81
7	Convenient synthesis of ordered mesoporous silica at room temperature and quasi-neutral pH. <i>Journal of Materials Chemistry</i> , 2009, 19, 8290.	6.7	80
8	Hollow filler based mixed matrix membranes. <i>Chemical Communications</i> , 2010, 46, 2492.	4.1	77
9	<sup>29</sup> Si NMR and UV-Raman Investigation of Initial Oligomerization Reaction Pathways in Acid-Catalyzed Silica Sol-Gel Chemistry. <i>Journal of Physical Chemistry C</i> , 2011, 115, 3562-3571.	3.1	72
10	Quantitative Three-Dimensional Modeling of Zeolite Through Discrete Electron Tomography. <i>Journal of the American Chemical Society</i> , 2009, 131, 4769-4773.	13.7	66
11	Evaluation of ordered mesoporous silica as a carrier for poorly soluble drugs: Influence of pressure on the structure and drug release. <i>Journal of Pharmaceutical Sciences</i> , 2011, 100, 3411-3420.	3.3	64
12	Investigation of the Mechanism of Colloidal Silicalite-1 Crystallization by Using DLS, SAXS, and <sup>29</sup> Si NMR Spectroscopy. <i>Chemistry - A European Journal</i> , 2010, 16, 2764-2774.	3.3	60
13	Continuous Synthesis Process of Hexagonal Nanoplates of <i>P6m</i> Ordered Mesoporous Silica. <i>Journal of the American Chemical Society</i> , 2011, 133, 13737-13745.	13.7	54
14	Template-Aluminosilicate Structures at the Early Stages of Zeolite ZSM-5 Formation. A Combined Preparative, Solid-state NMR, and Computational Study. <i>Journal of Physical Chemistry B</i> , 2005, 109, 22767-22774.	2.6	53
15	Simple synthesis recipes of porous materials. <i>Microporous and Mesoporous Materials</i> , 2011, 140, 2-8.	4.4	53
16	Connectivity Analysis of the Clear Sol Precursor of Silicalite: Are Nanoparticles Aggregated Oligomers or Silica Particles?. <i>Journal of Physical Chemistry C</i> , 2009, 113, 20827-20836.	3.1	51
17	Accuracy of potentiometric oxygen sensors with Bi/Bi <sub>2</sub> O <sub>3</sub> reference electrode for use in liquid LBE. <i>Journal of Nuclear Materials</i> , 2012, 429, 270-275.	2.7	51
18	Characterization of nanoparticles in diluted clear solutions for Silicalite-1 zeolite synthesis using liquid <sup>29</sup> Si NMR, SAXS and DLS. <i>Physical Chemistry Chemical Physics</i> , 2008, 10, 5574.	2.8	49

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19	Alkene epoxidation with mesoporous materials assembled from TS-1 seeds – Is there a hierarchical pore system?. <i>Journal of Catalysis</i> , 2010, 269, 367-375.	6.2	42
20	TEM Observation of Aggregation Steps in Room-Temperature Silicalite-1 Zeolite Formation. <i>Journal of Physical Chemistry C</i> , 2007, 111, 14283-14285.	3.1	41
21	Comparison of solid metal–metal oxide reference electrodes for potentiometric oxygen sensors in liquid lead–bismuth eutectic operating at low temperature ranges. <i>Sensors and Actuators B: Chemical</i> , 2015, 214, 20-28.	7.8	39
22	Shape Selectivity in Adsorption of <i>n</i> - and Isoalkanes on a Zeolite–Microporous/Mesoporous Hybrid and Mesoporous MCM-48. <i>Advanced Functional Materials</i> , 2007, 17, 3911-3917.	14.9	36
23	Multi-level Modeling of Silica–Template Interactions During Initial Stages of Zeolite Synthesis. <i>Topics in Catalysis</i> , 2009, 52, 1261-1271.	2.8	31
24	Decane hydroconversion on bifunctional Zeogrid and nano-zeolite assembled from aluminosilicate nanoslabs of MFI framework type. <i>Applied Catalysis A: General</i> , 2004, 257, 7-17.	4.3	29
25	Spacious and mechanically flexible mesoporous silica thin film composed of an open network of interlinked nanoslabs. <i>Journal of Materials Chemistry</i> , 2011, 21, 7692.	6.7	24
26	Control of dissolved oxygen in liquid LBE by electrochemical oxygen pumping. <i>Sensors and Actuators B: Chemical</i> , 2014, 204, 388-392.	7.8	24
27	Oxygen–iron interaction in liquid lead–bismuth eutectic alloy. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 19526-19530.	2.8	24
28	Modelling of synchrotron SAXS patterns of silicalite-1 zeolite during crystallization. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 4318.	2.8	22
29	A mass transfer correlation for packed bed of lead oxide spheres in flowing lead–bismuth eutectic at high Peclet numbers. <i>International Journal of Heat and Mass Transfer</i> , 2015, 80, 737-747.	4.8	22
30	Electrochemical Measurement of Sieverts™ Constant and Solubility of Oxygen in LBE at 598–748 K. <i>Journal of the Electrochemical Society</i> , 2017, 164, H743-H747.	2.9	22
31	Magnetic field assisted nanoparticle dispersion. <i>Chemical Communications</i> , 2008, , 47-49.	4.1	21
32	Investigation of Nanoparticles Occurring in the Colloidal Silicalite-1 Zeolite Crystallization Process Using Dissolution Experiments. <i>Chemistry of Materials</i> , 2010, 22, 3619-3629.	6.7	21
33	Growth of Itraconazole Nanofibers in Supersaturated Simulated Intestinal Fluid. <i>Molecular Pharmaceutics</i> , 2010, 7, 905-913.	4.6	19
34	Nucleation and growth of lead oxide particles in liquid lead-bismuth eutectic. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 27593-27602.	2.8	19
35	Numerical modeling of oxygen mass transfer in a wire wrapped fuel assembly under flowing lead bismuth eutectic. <i>Journal of Nuclear Materials</i> , 2018, 506, 53-62.	2.7	19
36	Synthesis of highly stable pure-silica thin-walled hexagonally ordered mesoporous material. <i>Chemical Communications</i> , 2009, , 4287.	4.1	17

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37	Catalytic Cracking of 2,2,4-Trimethylpentane on FAU, MFI, and Bimodal Porous Materials: Influence of Acid Properties and Pore Topology. <i>Industrial &amp; Engineering Chemistry Research</i> , 2010, 49, 6815-6823.	3.7	17
38	Polonium evaporation from dilute liquid metal solutions. <i>Journal of Nuclear Materials</i> , 2014, 450, 304-313.	2.7	17
39	n-Alkane hydroconversion on Zeogrid and colloidal ZSM-5 assembled from aluminosilicate nanoslabs of MFI framework type. <i>Chemical Communications</i> , 2003, , 1888.	4.1	15
40	Catalytic and molecular separation properties of Zeogrids and Zeotiles. <i>Catalysis Today</i> , 2011, 168, 17-27.	4.4	15
41	Active oxygen control by a PbO mass exchanger in the liquid lead–bismuth eutectic loop: MEXICO. <i>Journal of Nuclear Science and Technology</i> , 2017, 54, 131-137.	1.3	15
42	Equilibrium evaporation of trace polonium from liquid lead–bismuth eutectic at high temperature. <i>Journal of Nuclear Materials</i> , 2014, 450, 299-303.	2.7	14
43	Zeotile-2: A microporous analogue of MCM-48. <i>Solid State Sciences</i> , 2005, 7, 861-867.	3.2	12
44	Kinetics of intermediate-mediated self-assembly in nanosized materials: A generic model. <i>Journal of Chemical Physics</i> , 2010, 132, 164701.	3.0	11
45	Po-Containing Molecules in Fusion and Fission Reactors. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 2879-2884.	4.6	11
46	Performance of Electrochemical Oxygen Pump in a Liquid Lead-Bismuth Eutectic Loop. <i>Journal of the Electrochemical Society</i> , 2019, 166, E153-E158.	2.9	10
47	Optical fibre void fraction detection for liquid metal fast neutron reactors. <i>Experimental Thermal and Fluid Science</i> , 2020, 113, 109865.	2.7	10
48	Use of the transpiration method to study polonium evaporation from liquid lead-bismuth eutectic at high temperature. <i>Radiochimica Acta</i> , 2014, 102, 1083-1091.	1.2	9
49	Liquid Metal/Metal Oxide Reference Electrodes for Potentiometric Oxygen Sensor Operating in Liquid Lead Bismuth Eutectic in a Wide Temperature Range. <i>Procedia Engineering</i> , 2014, 87, 264-267.	1.2	8
50	Non-uniform polonium distribution in lead–bismuth eutectic revealed by evaporation experiments. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2014, 302, 195-200.	1.5	8
51	A multi-physics computational tool based on CFD and GEM chemical equilibrium solver for modeling coolant chemistry in nuclear reactors. <i>Progress in Nuclear Energy</i> , 2020, 120, 103190.	2.9	8
52	Synthesis and characterization of cok-12 ordered mesoporous silica at room temperature under buffered quasi neutral pH. <i>Studies in Surface Science and Catalysis</i> , 2010, 175, 681-684.	1.5	7
53	Evaporation of mercury impurity from liquid lead–bismuth eutectic. <i>Journal of Nuclear Materials</i> , 2014, 448, 276-281.	2.7	7
54	Adsorption of volatile polonium species on metals in various gas atmospheres: Part III – Adsorption of volatile polonium on stainless steel 316L. <i>Radiochimica Acta</i> , 2018, 106, 125-134.	1.2	7

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55	What has become of the Silicalite nanoslab? â€“ Recent insights into key steps of template-directed silicalite-1 formation. <i>Studies in Surface Science and Catalysis</i> , 2007, 170, 1473-1478.	1.5	6
56	Formation and transport of lead oxide in a non-isothermal lead-bismuth eutectic loop. <i>Nuclear Engineering and Design</i> , 2019, 349, 78-85.	1.7	6
57	Determination of the lead oxide fouling mechanisms in lead bismuth eutectic coolant. <i>Nuclear Engineering and Design</i> , 2020, 357, 110382.	1.7	6
58	Thermochromatographic behavior of iodine in fused silica columns when evaporated from leadâ€“bismuth eutectic. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2020, 326, 1249-1258.	1.5	6
59	Numerical modeling of iron-based corrosion product oxides mass transport in the MYRRHA reactor during normal operation. <i>Nuclear Engineering and Design</i> , 2018, 338, 199-208.	1.7	5
60	HELIOS3: A stirred bubble column for oxygen addition or reduction in lead-bismuth eutectic. <i>Nuclear Engineering and Design</i> , 2020, 365, 110716.	1.7	5
61	Experimental investigation on the oxygen cold trapping mechanism in LBE-cooled systems. <i>Nuclear Engineering and Design</i> , 2020, 364, 110664.	1.7	5
62	Polonium evaporation from liquid leadâ€“bismuth eutectic with different oxygen content. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2015, 309, 597.	1.5	4
63	Rate-Limiting Factors in Oxygen Transfer through Electrochemical Oxygen Pump in Liquid LBE. <i>Journal of the Electrochemical Society</i> , 2019, 166, E542-E546.	2.9	4
64	Single-step alcohol-free synthesis of coreâ€“shell nanoparticles of Î²-casein micelles and silica. <i>RSC Advances</i> , 2014, 4, 25650-25657.	3.6	3
65	Polonium behavior following a vacuum window rupture in a lead-bismuth eutectic based accelerator driven system. <i>Applied Radiation and Isotopes</i> , 2021, 168, 109551.	1.5	3
66	Behavior of Spallation, Activation and Fission Products in LBE. , 2020, , 735-765.		1
67	Tiling Silicalite Nanoslabs into 3D Mosaics. <i>Microscopy and Microanalysis</i> , 2003, 9, 270-271.	0.4	0
68	Thermochemistry of Polonium Evaporation from LBE. <i>Thermo</i> , 2021, 1, 251-261.	1.3	0
69	Solubility of Oxygen and Metastable Limit for PbO Nucleation in Liquid Pb. <i>Jom</i> , 2021, 73, 4023.	1.9	0
70	Modelling Coolant Chemistry in the MYRRHA Reactor with a Multi-Physics Computational Tool. , 2019, , .		0