

Martin Åala

List of Publications by Year in descending order

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| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Electrochemical Dissolution of Iridium and Iridium Oxide Particles in Acidic Media: Transmission Electron Microscopy, Electrochemical Flow Cell Coupled to Inductively Coupled Plasma Mass Spectrometry, and X-ray Absorption Spectroscopy Study. <i>Journal of the American Chemical Society</i> , 2017, 139, 12837-12846. | 13.7 | 186 |
| 2 | New Insights into Corrosion of Ruthenium and Ruthenium Oxide Nanoparticles in Acidic Media. <i>Journal of Physical Chemistry C</i> , 2015, 119, 10140-10147. | 3.1 | 161 |
| 3 | New Insight into Platinum Dissolution from Nanoparticulate Platinum-Based Electrocatalysts Using Highly Sensitive In-Situ Concentration Measurements. <i>ChemCatChem</i> , 2014, 6, 449-453. | 3.7 | 119 |
| 4 | New insights into the stability of a high performance nanostructured catalyst for sustainable water electrolysis. <i>Nano Energy</i> , 2017, 40, 618-632. | 16.0 | 112 |
| 5 | Multi-element analysis of wines by ICP-MS and ICP-OES and their classification according to geographical origin in Slovenia. <i>Food Chemistry</i> , 2014, 153, 414-423. | 8.2 | 100 |
| 6 | Positive Effect of Surface Doping with Au on the Stability of Pt-Based Electrocatalysts. <i>ACS Catalysis</i> , 2016, 6, 1630-1634. | 11.2 | 90 |
| 7 | Platinum Dissolution and Redeposition from Pt/C Fuel Cell Electrocatalyst at Potential Cycling. <i>Journal of the Electrochemical Society</i> , 2018, 165, F3161-F3165. | 2.9 | 80 |
| 8 | Atomically Resolved Dealloying of Structurally Ordered Pt Nanoalloy as an Oxygen Reduction Reaction Electrocatalyst. <i>ACS Catalysis</i> , 2016, 6, 5530-5534. | 11.2 | 65 |
| 9 | Gelatin gels as multi-element calibration standards in LA-ICP-MS bioimaging: fabrication of homogeneous standards and microhomogeneity testing. <i>Analyst</i> , 2017, 142, 3356-3359. | 3.5 | 59 |
| 10 | Active-Site Imprinting: Preparation of Fe-N-C Catalysts from Zinc Ion-Templated Ionothermal Nitrogen-Doped Carbons. <i>Advanced Energy Materials</i> , 2019, 9, 1902412. | 19.5 | 59 |
| 11 | Creating cellulose fibres with excellent UV protective properties using moist CF ₄ plasma and ZnO nanoparticles. <i>Cellulose</i> , 2014, 21, 3007-3021. | 4.9 | 58 |
| 12 | Nighttime Aqueous-Phase Formation of Nitrocatechols in the Atmospheric Condensed Phase. <i>Environmental Science & Technology</i> , 2018, 52, 9722-9730. | 10.0 | 57 |
| 13 | Resolving the nanoparticles' structure-property relationships at the atomic level: a study of Pt-based electrocatalysts. <i>IScience</i> , 2021, 24, 102102. | 4.1 | 57 |
| 14 | Comparison of Pt-Cu/C with Benchmark Pt-Co/C: Metal Dissolution and Their Surface Interactions. <i>ACS Applied Energy Materials</i> , 2019, 2, 3131-3141. | 5.1 | 54 |
| 15 | Determination of triacylglycerol regioisomers using differential mobility spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2016, 30, 256-264. | 1.5 | 52 |
| 16 | Development of antibacterial and UV protective cotton fabrics using plant food waste and alien invasive plant extracts as reducing agents for the in-situ synthesis of silver nanoparticles. <i>Cellulose</i> , 2021, 28, 3215-3233. | 4.9 | 49 |
| 17 | Quantum Chemical Calculations Resolved Identification of Methylnitrocatechols in Atmospheric Aerosols. <i>Environmental Science & Technology</i> , 2016, 50, 5526-5535. | 10.0 | 47 |
| 18 | Toxic effects of perfluorinated compounds at human cellular level and on a model vertebrate. <i>Food and Chemical Toxicology</i> , 2017, 104, 14-25. | 3.6 | 47 |

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|----|---|------|-----------|
| 19 | Insights into the selection of 2D LA-ICP-MS (multi)elemental mapping conditions. <i>Journal of Analytical Atomic Spectrometry</i> , 2019, 34, 1919-1931. | 3.0 | 46 |
| 20 | Construction of a New Class of Tetracycline Lead Structures with Potent Antibacterial Activity through Biosynthetic Engineering. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 3937-3940. | 13.8 | 45 |
| 21 | Importance of non-intrinsic platinum dissolution in Pt/C composite fuel cell catalysts. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 21446-21452. | 2.8 | 44 |
| 22 | Nanoparticle Analysis in Biomaterials Using Laser Ablation~Single Particle~Inductively Coupled Plasma Mass Spectrometry. <i>Analytical Chemistry</i> , 2019, 91, 6200-6205. | 6.5 | 43 |
| 23 | 3D laser ablation-ICP-mass spectrometry mapping for the study of surface layer phenomena ~ a case study for weathered glass. <i>Journal of Analytical Atomic Spectrometry</i> , 2013, 28, 994. | 3.0 | 41 |
| 24 | Functionalization of Cellulose Fibres with Oxygen Plasma and ZnO Nanoparticles for Achieving UV Protective Properties. <i>Journal of Nanomaterials</i> , 2015, 2015, 1-9. | 2.7 | 41 |
| 25 | Effect of the Morphology of the High-Surface-Area Support on the Performance of the Oxygen-Evolution Reaction for Iridium Nanoparticles. <i>ACS Catalysis</i> , 2021, 11, 670-681. | 11.2 | 40 |
| 26 | Potentiodynamic dissolution study of PtRu/C electrocatalyst in the presence of methanol. <i>Electrochimica Acta</i> , 2016, 211, 851-859. | 5.2 | 39 |
| 27 | The use of ASH-15 flowstone as a matrix-matched reference material for laser-ablation U~Pb geochronology of calcite. <i>Geochronology</i> , 2021, 3, 35-47. | 2.5 | 39 |
| 28 | Understanding the Crucial Significance of the Temperature and Potential Window on the Stability of Carbon Supported Pt-Alloy Nanoparticles as Oxygen Reduction Reaction Electrocatalysts. <i>ACS Catalysis</i> , 2022, 12, 101-115. | 11.2 | 38 |
| 29 | CO-assisted ex-situ chemical activation of Pt-Cu/C oxygen reduction reaction electrocatalyst. <i>Electrochimica Acta</i> , 2019, 306, 377-386. | 5.2 | 37 |
| 30 | Ion Attachment Mass Spectrometry Combined with Infrared Image Furnace for Thermal Analysis: Evolved Gas Analysis Studies. <i>Analytical Chemistry</i> , 2009, 81, 3155-3158. | 6.5 | 34 |
| 31 | Potentiometric and ³¹ P NMR studies on inositol phosphates and their interaction with iron(III) ions. <i>Carbohydrate Research</i> , 2011, 346, 488-494. | 2.3 | 34 |
| 32 | Analytical figures of merit of a low-dispersion aerosol transport system for high-throughput LA-ICP-MS analysis. <i>Journal of Analytical Atomic Spectrometry</i> , 2021, 36, 1201-1209. | 3.0 | 33 |
| 33 | Insight into the Short-Range Structure of Amorphous Iron Inositol Hexaphosphate as Provided by ³¹ P NMR and Fe X-ray Absorption Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2006, 110, 23060-23067. | 2.6 | 30 |
| 34 | Electrochemical in-situ dissolution study of structurally ordered, disordered and gold doped PtCu ₃ nanoparticles on carbon composites. <i>Journal of Power Sources</i> , 2016, 327, 675-680. | 7.8 | 30 |
| 35 | Durable antibacterial and UV protective properties of cellulose fabric functionalized with Ag/TiO ₂ nanocomposite during dyeing with reactive dyes. <i>Cellulose</i> , 2016, 23, 2199-2209. | 4.9 | 30 |
| 36 | A Double~Passivation Water~Based Galvanic Displacement Method for Reproducible Gram~Scale Production of High~Performance Platinum~Alloy Electrocatalysts. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 13266-13270. | 13.8 | 29 |

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|----|---|------|-----------|
| 37 | Identification of the chelocardin biosynthetic gene cluster from <i>Amycolatopsis sulphurea</i> : a platform for producing novel tetracycline antibiotics. <i>Microbiology (United Kingdom)</i> , 2013, 159, 2524-2532. | 1.8 | 27 |
| 38 | Stabilisation of Paper Containing Iron-Gall Ink with Current Aqueous Processes. <i>Restaurator</i> , 2005, 26, 181-189. | 0.2 | 25 |
| 39 | Imaging Artifacts in Continuous Scanning 2D LA-ICPMS Imaging Due to Nonsynchronization Issues. <i>Analytical Chemistry</i> , 2018, 90, 2896-2901. | 6.5 | 24 |
| 40 | Tolerance and accumulation of cobalt in three species of <i>Haumaniastrum</i> and the influence of copper. <i>Environmental and Experimental Botany</i> , 2018, 149, 27-33. | 4.2 | 24 |
| 41 | A study towards superior carbon nanotubes-supported Pd-based catalysts for formic acid electro-oxidation: Preparation, properties and characterisation. <i>Journal of Power Sources</i> , 2013, 235, 111-116. | 7.8 | 22 |
| 42 | Aqueous-Phase Brown Carbon Formation from Aromatic Precursors under Sunlight Conditions. <i>Atmosphere</i> , 2020, 11, 131. | 2.3 | 22 |
| 43 | Observing, tracking and analysing electrochemically induced atomic-scale structural changes of an individual Pt-Co nanoparticle as a fuel cell electrocatalyst by combining modified floating electrode and identical location electron microscopy. <i>Electrochimica Acta</i> , 2021, 388, 138513. | 5.2 | 22 |
| 44 | Synthesis and Advanced Electrochemical Characterization of Multifunctional Electrocatalytic Composite for Unitized Regenerative Fuel Cell. <i>ACS Catalysis</i> , 2019, 9, 11468-11483. | 11.2 | 21 |
| 45 | Toward the Continuous Production of Multigram Quantities of Highly Uniform Supported Metallic Nanoparticles and Their Application for Synthesis of Superior Intermetallic Pt-Alloy ORR Electrocatalysts. <i>ACS Applied Energy Materials</i> , 2021, 4, 13819-13829. | 5.1 | 21 |
| 46 | Effect of atmosphere and catalyst on reducing bisphenol A (BPA) emission during thermal degradation of polycarbonate. <i>Chemosphere</i> , 2010, 78, 42-45. | 8.2 | 20 |
| 47 | Novel Green In Situ Synthesis of ZnO Nanoparticles on Cotton Using Pomegranate Peel Extract. <i>Materials</i> , 2021, 14, 4472. | 2.9 | 20 |
| 48 | Electrochemical Stability and Degradation Mechanisms of Commercial Carbon-Supported Gold Nanoparticles in Acidic Media. <i>Journal of Physical Chemistry C</i> , 2021, 125, 635-647. | 3.1 | 18 |
| 49 | Sacrificial Cu Layer Mediated the Formation of an Active and Stable Supported Iridium Oxygen Evolution Reaction Electrocatalyst. <i>ACS Catalysis</i> , 2021, 11, 12510-12519. | 11.2 | 18 |
| 50 | Synthesis of myo-inositol 1,2,3-tris- and 1,2,3,5-tetrakis(dihydrogen phosphate)s as a tool for the inhibition of iron-gall-ink corrosion. <i>Carbohydrate Research</i> , 2006, 341, 897-902. | 2.3 | 17 |
| 51 | Pyrazine-Assisted Dimerization of Molybdenum(V): Synthesis and Structural Characterization of Novel Dinuclear and Tetranuclear Complexes. <i>European Journal of Inorganic Chemistry</i> , 2010, 2010, 542-553. | 2.0 | 17 |
| 52 | A Double-Passivation Water-Based Galvanic Displacement Method for Reproducible Gram-Scale Production of High-Performance Platinum-Alloy Electrocatalysts. <i>Angewandte Chemie</i> , 2019, 131, 13400-13404. | 2.0 | 17 |
| 53 | Atomic Scale Insights into Electrochemical Dissolution of Janus Pt-SnO ₂ Nanoparticles in the Presence of Ethanol in Acidic Media: An IL-STEM and EFC-ICP-MS Study. <i>Journal of Physical Chemistry C</i> , 2018, 122, 10050-10058. | 3.1 | 16 |
| 54 | Effect of Particle Size on the Corrosion Behaviour of Gold in the Presence of Chloride Impurities: An EFC-ICP-MS Potentiodynamic Study. <i>Coatings</i> , 2019, 9, 10. | 2.6 | 16 |

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|----|--|------|-----------|
| 55 | Lithium contamination of honeybee products and its accumulation in brood as a consequence of anti-varroa treatment. <i>Food Chemistry</i> , 2020, 330, 127334. | 8.2 | 16 |
| 56 | Evaluation of a method for treatment of iron gall ink corrosion on paper. <i>Cellulose</i> , 2014, 21, 2925-2936. | 4.9 | 15 |
| 57 | Laser ablation-single-particle-inductively coupled plasma mass spectrometry as a multimodality bioimaging tool in nano-based omics. <i>Environmental Science: Nano</i> , 2021, 8, 647-656. | 4.3 | 15 |
| 58 | Importance of Chemical Activation and the Effect of Low Operation Voltage on the Performance of Pt-Alloy Fuel Cell Electrocatalysts. <i>ACS Applied Energy Materials</i> , 2022, 5, 8862-8877. | 5.1 | 15 |
| 59 | Insight on Single Cell Proton Exchange Membrane Fuel Cell Performance of Pt-Cu/C Cathode. <i>Catalysts</i> , 2019, 9, 544. | 3.5 | 14 |
| 60 | Analytical performance of a high-repetition rate laser head (500 Hz) for HR LA-ICP-QMS imaging. <i>Journal of Analytical Atomic Spectrometry</i> , 2020, 35, 1827-1831. | 3.0 | 14 |
| 61 | Imaging the impurity distribution in glacier ice cores with LA-ICP-MS. <i>Journal of Analytical Atomic Spectrometry</i> , 2020, 35, 2204-2212. | 3.0 | 14 |
| 62 | Oleic Acid Metabolism via a Conserved Cytochrome P450 System-Mediated α -Hydroxylation in the Bark Beetle-Associated Fungus <i>Grosmannia clavigera</i> . <i>PLoS ONE</i> , 2015, 10, e0120119. | 2.5 | 13 |
| 63 | Increase of electrodeposited catalyst stability via plasma grown vertically oriented graphene nanoparticle movement restriction. <i>Chemical Communications</i> , 2017, 53, 9340-9343. | 4.1 | 13 |
| 64 | Stability study of silver nanoparticles towards the halide electroreduction. <i>Electrochimica Acta</i> , 2018, 286, 123-130. | 5.2 | 13 |
| 65 | Critical review on the development of analytical techniques for the elemental analysis of airborne particulate matter. <i>Trends in Environmental Analytical Chemistry</i> , 2022, 33, e00155. | 10.3 | 13 |
| 66 | Electrochemical Stability and Degradation of Commercial Pd/C Catalyst in Acidic Media. <i>Journal of Physical Chemistry C</i> , 2021, 125, 27534-27542. | 3.1 | 13 |
| 67 | Gadolinium tissue deposition in the periodontal ligament of mice with reduced renal function exposed to Gd-based contrast agents. <i>Toxicology Letters</i> , 2019, 301, 157-167. | 0.8 | 12 |
| 68 | Implications of laser shot dosage on image quality in LA-ICP-QMS imaging. <i>Journal of Analytical Atomic Spectrometry</i> , 2021, 36, 75-79. | 3.0 | 12 |
| 69 | Electrochemistry as a Tool for Studies of Complex Reaction Mechanisms: The Case of the Atmospheric Aqueous-Phase Aging of Catechols. <i>Environmental Science & Technology</i> , 2019, 53, 11195-11203. | 10.0 | 11 |
| 70 | No more waste at the elemental analysis of airborne particulate matter on quartz fibre filters. <i>Talanta</i> , 2021, 226, 122110. | 5.5 | 11 |
| 71 | In situ electrochemical dissolution of platinum and gold in organic-based solvent. <i>Npj Materials Degradation</i> , 2018, 2, . | 5.8 | 10 |
| 72 | Enhancing Iridium Nanoparticles'™ Oxygen Evolution Reaction Activity and Stability by Adjusting the Coverage of Titanium Oxynitride Flakes on Reduced Graphene Oxide Nanoribbons'™ Support. <i>Advanced Materials Interfaces</i> , 2021, 8, 2100900. | 3.7 | 10 |

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|----|--|-----|-----------|
| 73 | The influence of in situ synthesis parameters on the formation of ZnO nanoparticles and the UPF value of cotton fabric. <i>Tekstilec</i> , 2018, 61, 280-288. | 0.6 | 10 |
| 74 | Seasonal variability of nitroaromatic compounds in ambient aerosols: Mass size distribution, possible sources and contribution to water-soluble brown carbon light absorption. <i>Chemosphere</i> , 2022, 299, 134381. | 8.2 | 10 |
| 75 | Perceptual Image Quality Metrics Concept in Continuous Scanning 2D Laser Ablation-Inductively Coupled Plasma Mass Spectrometry Bioimaging. <i>Analytical Chemistry</i> , 2018, 90, 5916-5922. | 6.5 | 9 |
| 76 | Fine-tuning of LA-ICP-QMS conditions for elemental mapping. <i>Journal of Analytical Atomic Spectrometry</i> , 2020, 35, 2494-2497. | 3.0 | 9 |
| 77 | Pollution levels and deposition processes of airborne organic pollutants over the central Adriatic area: Temporal variabilities and source identification. <i>Marine Pollution Bulletin</i> , 2021, 172, 112873. | 5.0 | 9 |
| 78 | Synthesis of 3-(1± and 1²-d-arabinofuranosyl)-6-chloro-1,2,4-triazolo[4,3-b]pyridazine. <i>Carbohydrate Research</i> , 2003, 338, 2057-2066. | 2.3 | 8 |
| 79 | Studying gold nanoparticle degradation during laser ablationâ€single particle-inductively coupled plasma mass spectrometry analysis. <i>Journal of Analytical Atomic Spectrometry</i> , 2021, 36, 1879-1883. | 3.0 | 7 |
| 80 | Designing UV-protective and hydrophilic or hydrophobic cotton fabrics through in-situ ZnO synthesis using biodegradable waste extracts. <i>Applied Surface Science</i> , 2022, 599, 153931. | 6.1 | 7 |
| 81 | Voltammetric Investigation of Iron(III) Interactions with Phytate. <i>Electrochimica Acta</i> , 2015, 176, 1116-1125. | 5.2 | 6 |
| 82 | Two-dimensional impurity imaging in deep Antarctic ice cores: snapshots of three climatic periods and implications for high-resolution signal interpretation. <i>Cryosphere</i> , 2021, 15, 3523-3538. | 3.9 | 6 |
| 83 | Suppressing Platinum Electrocatalyst Degradation via a High-Surface-Area Organic Matrix Support. <i>ACS Omega</i> , 2022, 7, 3540-3548. | 3.5 | 6 |
| 84 | Rapid identification of atypical tetracyclines using tandem mass spectrometric fragmentation patterns. <i>Rapid Communications in Mass Spectrometry</i> , 2015, 29, 1556-1562. | 1.5 | 5 |
| 85 | Microanalysis of arsenic in solid samples by laser ablation-atomic fluorescence spectrometry. <i>Journal of Analytical Atomic Spectrometry</i> , 2017, 32, 299-304. | 3.0 | 5 |
| 86 | Laser ablation ICP-MS of size-segregated atmospheric particles collected with a MOUDI cascade impactor: a proof of concept. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 1823-1830. | 3.1 | 5 |
| 87 | Corrosion Protection of Platinum-Based Electrocatalyst by Ruthenium Surface Decoration. <i>ACS Applied Energy Materials</i> , 2018, 1, 3190-3197. | 5.1 | 5 |
| 88 | Multiple copies of the oxytetracycline gene cluster in selected <i>Streptomyces rimosus</i> strains can provide significantly increased titers. <i>Microbial Cell Factories</i> , 2021, 20, 47. | 4.0 | 5 |
| 89 | Comparison of single pulse, multiple dosage, and 2D oversampling / deconvolution LA-ICPMS strategies for mapping of (ultra)low-concentration samples. <i>Talanta</i> , 2021, 235, 122785. | 5.5 | 5 |
| 90 | Electrochemical stability and degradation of commercial Rh/C catalyst in acidic media. <i>Electrochimica Acta</i> , 2021, 400, 139435. | 5.2 | 5 |

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|----|--|-----|-----------|
| 91 | Ferroelectric bismuth-titanate nanoplatelets and nanowires with a new crystal structure. <i>Nanoscale</i> , 2022, 14, 3537-3544. | 5.6 | 5 |
| 92 | The Halophyte Species <i>Solanum chilense</i> Dun. Maintains Its Reproduction despite Sodium Accumulation in Its Floral Organs. <i>Plants</i> , 2022, 11, 672. | 3.5 | 5 |
| 93 | Electrochemical performance of platinum electrodes within the multi-electrode spiral nerve cuff. <i>Australasian Physical and Engineering Sciences in Medicine</i> , 2014, 37, 525-533. | 1.3 | 4 |
| 94 | High-surface-area organic matrix tris(aza)pentacene supported platinum nanostructures as selective electrocatalyst for hydrogen oxidation/evolution reaction and suppressive for oxygen reduction reaction. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 25039-25049. | 7.1 | 4 |
| 95 | Complete Set of Critical Points on the C60H+ Potential Energy Surface. <i>Journal of Physical Chemistry A</i> , 2009, 113, 3223-3226. | 2.5 | 3 |
| 96 | Influence of copper chloride for the formation of aromatic compounds during polyethylene pyrolysis. <i>Journal of Analytical and Applied Pyrolysis</i> , 2010, 89, 178-182. | 5.5 | 3 |
| 97 | Absolute determination of the X-ray absorption coefficient of barium in the Lregion using a liquid absorption cell. <i>X-Ray Spectrometry</i> , 2013, 42, 63-67. | 1.4 | 2 |
| 98 | Age and growth of one of the world's largest carnivorous gastropods, the Florida Horse Conch, <i>Triplofusus giganteus</i> (Kiener, 1840), a target of unregulated, intense harvest. <i>PLoS ONE</i> , 2022, 17, e0265095. | 2.5 | 2 |
| 99 | Determination of trace concentrations of simple phenols in ambient PM samples. <i>Chemosphere</i> , 2022, 303, 135313. | 8.2 | 2 |