

Rodolphe Antoine

List of Publications by Year in descending order

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134
papers

3,939
citations

117571

34
h-index

168321

53
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140
all docs

140
docs citations

140
times ranked

4101
citing authors

#	ARTICLE	IF	CITATIONS
1	Testing the Vesicular Morphology to Destruction: Birth and Death of Diblock Copolymer Vesicles Prepared via Polymerization-Induced Self-Assembly. <i>Journal of the American Chemical Society</i> , 2015, 137, 1929-1937.	6.6	168
2	Ultrasmall Rigid Particles as Multimodal Probes for Medical Applications. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 12299-12303.	7.2	156
3	Long-Term <i>in Vivo</i> Clearance of Gadolinium-Based AGuIX Nanoparticles and Their Biocompatibility after Systemic Injection. <i>ACS Nano</i> , 2015, 9, 2477-2488.	7.3	132
4	Visible and ultraviolet spectroscopy of gas phase protein ions. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 16494.	1.3	118
5	A Top-Down Synthesis Route to Ultrasmall Multifunctional Gd-Based Silica Nanoparticles for Theranostic Applications. <i>Chemistry - A European Journal</i> , 2013, 19, 6122-6136.	1.7	115
6	Non-linear optical properties of gold quantum clusters. The smaller the better. <i>Nanoscale</i> , 2014, 6, 13572-13578.	2.8	108
7	Think Negative: Finding the Best Electrospray Ionization/MS Mode for Your Analyte. <i>Analytical Chemistry</i> , 2017, 89, 5665-5668.	3.2	84
8	Synthesis, characterization and optical properties of low nuclearity liganded silver clusters: Ag ₃₁ (SG) ₁₉ and Ag ₁₅ (SG) ₁₁ . <i>Nanoscale</i> , 2013, 5, 5637.	2.8	83
9	Surface plasmon enhanced non-linear optical response of gold nanoparticles at the air/toluene interface. <i>Chemical Communications</i> , 1997, , 1901.	2.2	77
10	Tuning Ag ₂₉ nanocluster light emission from red to blue with one and two-photon excitation. <i>Nanoscale</i> , 2016, 8, 2892-2898.	2.8	75
11	Activated-Electron Photodetachment Dissociation for the Structural Characterization of Protein Polyanions. <i>Analytical Chemistry</i> , 2009, 81, 8410-8416.	3.2	66
12	Effect of Mobile Phase on Electrospray Ionization Efficiency. <i>Journal of the American Society for Mass Spectrometry</i> , 2014, 25, 1853-1861.	1.2	61
13	Charging megadalton poly(ethylene oxide)s by electrospray ionization. A charge detection mass spectrometry study. <i>Rapid Communications in Mass Spectrometry</i> , 2011, 25, 617-623.	0.7	54
14	Enhanced two-photon absorption of ligated silver and gold nanoclusters: theoretical and experimental assessments. <i>Nanoscale</i> , 2019, 11, 12436-12448.	2.8	54
15	Action-FRET: Probing the Molecular Conformation of Mass-Selected Gas-Phase Peptides with Förster Resonance Energy Transfer Detected by Acceptor-Specific Fragmentation. <i>Analytical Chemistry</i> , 2014, 86, 8798-8804.	3.2	53
16	Mass Determination of Entire Amyloid Fibrils by Using Mass Spectrometry. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 2340-2344.	7.2	53
17	Zwitterion functionalized gold nanoclusters for multimodal near infrared fluorescence and photoacoustic imaging. <i>APL Materials</i> , 2017, 5, .	2.2	52
18	Silver cluster-biomolecule hybrids: from basics towards sensors. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 9282.	1.3	51

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19	Charge Detection Mass Spectrometry for the Characterization of Mass and Surface Area of Composite Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2015, 119, 10844-10849.	1.5	51
20	Absorption Enhancement and Conformational Control of Peptides by Small Silver Clusters. <i>Physical Review Letters</i> , 2008, 101, 213001.	2.9	50
21	Functionalization of Small Rigid Platforms with Cyclic RGD Peptides for Targeting Tumors Overexpressing $\alpha_3\beta_1$ -Integrins. <i>Bioconjugate Chemistry</i> , 2013, 24, 1584-1597.	1.8	49
22	Au ₁₀ (SG) ₁₀ : A Chiral Gold Catenane Nanocluster with Zero Confined Electrons. Optical Properties and First-Principles Theoretical Analysis. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 1979-1985.	2.1	49
23	Size dependence of the surface plasmon enhanced second harmonic response of gold colloids: towards a new calibration method. <i>Chemical Communications</i> , 1999, , 581-582.	2.2	47
24	Direct Molar Mass Determination of Self-Assembled Amphiphilic Block Copolymer Nanoobjects Using Electrospray-Charge Detection Mass Spectrometry. <i>ACS Macro Letters</i> , 2012, 1, 414-417.	2.3	47
25	Glutathione capped gold Au (SG) clusters studied by isotope-resolved mass spectrometry. <i>International Journal of Mass Spectrometry</i> , 2013, 335, 1-6.	0.7	46
26	Infrared multiphoton dissociation tandem charge detection-mass spectrometry of single megadalton electrosprayed ions. <i>Review of Scientific Instruments</i> , 2011, 82, 084104.	0.6	44
27	High photoluminescence of shortwave infrared-emitting anisotropic surface charged gold nanoclusters. <i>Nanoscale</i> , 2019, 11, 12092-12096.	2.8	44
28	Conformation of Polyalanine and Polyglycine Dications in the Gas Phase: Insight from Ion Mobility Spectrometry and Replica-Exchange Molecular Dynamics. <i>Journal of Physical Chemistry A</i> , 2010, 114, 6888-6896.	1.1	43
29	Isomeric Effect of Mercaptobenzoic Acids on the Synthesis, Stability, and Optical Properties of Au ₂₅ (MBA) ₁₈ Nanoclusters. <i>ACS Omega</i> , 2018, 3, 15635-15642.	1.6	42
30	Electron Emission of Gas-Phase [Au ₂₅ (SG) ₁₈ -6H] ⁷⁺ Gold Cluster and Its Action Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2010, 1, 3189-3194.	2.1	41
31	Ligand-core NLO-phores: a combined experimental and theoretical approach to the two-photon absorption and two-photon excited emission properties of small-ligated silver nanoclusters. <i>Nanoscale</i> , 2017, 9, 1221-1228.	2.8	40
32	pH-Induced transformation of ligated Au ₂₅ to brighter Au ₂₃ nanoclusters. <i>Nanoscale</i> , 2018, 10, 11335-11341.	2.8	39
33	Doubly Charged Silver Clusters Stabilized by Tryptophan: Ag ₄ ²⁺ as an Optical Marker for Monitoring Particle Growth. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 878-881.	7.2	38
34	Conformational changes in amyloid-beta (12 μ 28) alloforms studied using action-FRET, IMS and molecular dynamics simulations. <i>Chemical Science</i> , 2015, 6, 5040-5047.	3.7	37
35	Relation between charge state distributions of peptide anions and pH changes in the electrospray plume. A mass spectrometry and optical spectroscopy investigation. <i>International Journal of Mass Spectrometry</i> , 2011, 308, 41-48.	0.7	35
36	Spectroscopy of isolated, mass-selected tryptophan-Ag ₃ complexes: A model for photoabsorption enhancement in nanoparticle-biomolecule hybrid systems. <i>Journal of Chemical Physics</i> , 2006, 125, 164326.	1.2	34

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37	Structural and Optical Properties of Isolated Noble Metal-Glutathione Complexes: Insight into the Chemistry of Liganded Nanoclusters. <i>Journal of Physical Chemistry C</i> , 2011, 115, 24549-24554.	1.5	34
38	Correlating Droplet Size with Temperature Changes in Electrospray Source by Optical Methods. <i>Analytical Chemistry</i> , 2015, 87, 8210-8217.	3.2	34
39	Profiling an electrospray plume by laser-induced fluorescence and Fraunhofer diffraction combined to mass spectrometry: influence of size and composition of droplets on charge-state distributions of electrosprayed proteins. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 9389.	1.3	32
40	Bifunctional polypyridyl-Ru(II) complex grafted onto gadolinium-based nanoparticles for MR-imaging and photodynamic therapy. <i>Dalton Transactions</i> , 2013, 42, 12410.	1.6	32
41	Optical extinction and scattering cross sections of plasmonic nanoparticle dimers in aqueous suspension. <i>Nanoscale</i> , 2016, 8, 6555-6570.	2.8	32
42	Size Characterization of Glutathione-Protected Gold Nanoclusters in the Solid, Liquid and Gas Phases. <i>Journal of Physical Chemistry C</i> , 2017, 121, 27733-27740.	1.5	32
43	Two-photon absorption of ligand-protected Ag ₁₅ nanoclusters. Towards a new class of nonlinear optics nanomaterials. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 12404-12408.	1.3	31
44	Current Status and Perspectives of Protease Inhibitors and Their Combination with Nanosized Drug Delivery Systems for Targeted Cancer Therapy. <i>Drug Design, Development and Therapy</i> , 2021, Volume 15, 9-20.	2.0	31
45	In Situ Decoration of Gold Nanoparticles on Graphene Oxide via Nanosecond Laser Ablation for Remarkable Chemical Sensing and Catalysis. <i>Nanomaterials</i> , 2019, 9, 1201.	1.9	30
46	Optical Properties of Gas-Phase Tryptophan-Silver Cations: Charge Transfer from the Indole Ring to the Silver Atom. <i>ChemPhysChem</i> , 2006, 7, 524-528.	1.0	29
47	Electron photodetachment dissociation for structural characterization of synthetic and bio-polymer anions. <i>Mass Spectrometry Reviews</i> , 2014, 33, 501-522.	2.8	29
48	Gold nanoclusters as a contrast agent for image-guided surgery of head and neck tumors. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2019, 20, 102011.	1.7	29
49	Self-Assembled Metal Nanoclusters: Driving Forces and Structural Correlation with Optical Properties. <i>Nanomaterials</i> , 2022, 12, 544.	1.9	29
50	Binding motifs of silver in prion octarepeat model peptides: a joint ion mobility, IR and UV spectroscopies, and theoretical approach. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 11433.	1.3	28
51	Coupling of HPLC with Electrospray Ionization Mass Spectrometry for Studying the Aging of Ultrasmall Multifunctional Gadolinium-Based Silica Nanoparticles. <i>Analytical Chemistry</i> , 2013, 85, 10440-10447.	3.2	28
52	Chiral supramolecular gold-cysteine nanoparticles: Chiroptical and nonlinear optical properties. <i>Progress in Natural Science: Materials International</i> , 2016, 26, 455-460.	1.8	27
53	Nanotechnology in Tumor Biomarker Detection: The Potential of Liganded Nanoclusters as Nonlinear Optical Contrast Agents for Molecular Diagnostics of Cancer. <i>Cancers</i> , 2021, 13, 4206.	1.7	27
54	Pushing the Limit of Infrared Multiphoton Dissociation to Megadalton-Size DNA Ions. <i>Journal of Physical Chemistry Letters</i> , 2012, 3, 2141-2145.	2.1	26

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55	Mass and charge distributions of amyloid fibers involved in neurodegenerative diseases: mapping heterogeneity and polymorphism. <i>Chemical Science</i> , 2018, 9, 2791-2796.	3.7	26
56	Probing electrostatic interactions and structural changes in highly charged protein polyanions by conformer-selective photoelectron spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 15554.	1.3	25
57	Gas-phase VUV photoionisation and photofragmentation of the silver deuteride nanocluster $[Ag_{10}D_8L_6]^{2+}$ (L = bis(diphenylphosphino)methane). A joint experimental and theoretical study. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 25772-25777.	1.3	25
58	Bulky Counterions: Enhancing the Two-Photon Excited Fluorescence of Gold Nanoclusters. <i>ChemPhysChem</i> , 2018, 19, 165-168.	1.0	25
59	High fidelity visualization of multiscale dynamics of laser-induced bubbles in liquids containing gold nanoparticles. <i>Scientific Reports</i> , 2018, 8, 9665.	1.6	24
60	Ligand shell size effects on one- and two-photon excitation fluorescence of zwitterion functionalized gold nanoclusters. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 23916-23921.	1.3	24
61	Development of gadolinium based nanoparticles having an affinity towards melanin. <i>Nanoscale</i> , 2013, 5, 1603.	2.8	23
62	The emergence of mass spectrometry for characterizing nanomaterials. Atomically precise nanoclusters and beyond. <i>Materials Advances</i> , 2021, 2, 4896-4913.	2.6	23
63	Combining ion mobility mass spectrometry and infrared multiphoton dissociation spectroscopy to probe the structure of gas-phase vancomycin-Ac2LKDADA non-covalent complex. <i>International Journal of Mass Spectrometry</i> , 2010, 297, 28-35.	0.7	22
64	Correlation between the Charge of Polymer Particles in Solution and in the Gas Phase Investigated by Zeta-Potential Measurements and Electrospray Ionization Mass Spectrometry.. <i>Langmuir</i> , 2013, 29, 14074-14081.	1.6	22
65	Multiphoton dissociation of macromolecular ions at the single-molecule level. <i>Physical Review A</i> , 2013, 87, .	1.0	22
66	Temperature Response of Rhodamine B-Doped Latex Particles. From Solution to Single Particles. <i>Langmuir</i> , 2016, 32, 4052-4058.	1.6	22
67	Sizing protein-templated gold nanoclusters by time resolved fluorescence anisotropy decay measurements. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2018, 193, 283-288.	2.0	21
68	Gold nanoclusters elicit homeostatic perturbations in glioblastoma cells and adaptive changes of lysosomes. <i>Theranostics</i> , 2020, 10, 1633-1648.	4.6	21
69	Photoluminescence of Fully Inorganic Colloidal Gold Nanocluster and Their Manipulation Using Surface Charge Effects. <i>Advanced Materials</i> , 2021, 33, e2101549.	11.1	21
70	Gas-Phase Synthesis and Intense Visible Absorption of Tryptophan-Gold Cations. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 7829-7832.	7.2	20
71	The Gas-Phase Photophysics of Eosin Y and its Maleimide Conjugate. <i>Journal of Physical Chemistry A</i> , 2016, 120, 3484-3490.	1.1	20
72	Templating S100A9 amyloids on β fibrillar surfaces revealed by charge detection mass spectrometry, microscopy, kinetic and microfluidic analyses. <i>Chemical Science</i> , 2020, 11, 7031-7039.	3.7	20

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91	Influence of the Spatial Conformation of Charged Ligands on the Optical Properties of Gold Nanoclusters. <i>Journal of Physical Chemistry C</i> , 2019, 123, 26705-26717.	1.5	15
92	Visible and Ultraviolet Spectroscopy of Gas Phase Rhodamine 575 Cations. <i>Journal of Physical Chemistry A</i> , 2015, 119, 5634-5641.	1.1	14
93	Structure and Charge Heterogeneity in Isomeric Au ₂₅ (MBA) ₁₈ Nanoclusters—Insights from Ion Mobility and Mass Spectrometry. <i>Journal of Physical Chemistry A</i> , 2020, 124, 5840-5848.	1.1	14
94	Formation and characterization of thioglycolic acid–silver cluster complexes. <i>Dalton Transactions</i> , 2013, 42, 8328.	1.6	13
95	Structural insights into glutathione-protected gold Au ₁₀ ~ ₁₂ (SG) ₁₀ ~ ₁₂ nanoclusters revealed by ion mobility mass spectrometry. <i>European Physical Journal D</i> , 2018, 72, 1.	0.6	13
96	Organotypic and primary neural cultures as models to assess effects of different gold nanostructures on glia and neurons. <i>Nanotoxicology</i> , 2019, 13, 285-304.	1.6	13
97	Tailoring the NIR–Photoluminescence of Single Thiolated Au ₂₅ Nanoclusters by Selective Binding to Proteins**. <i>Chemistry - A European Journal</i> , 2022, 28, .	1.7	13
98	Recent progress and prospects of random lasers using advanced materials. <i>Materials Advances</i> , 2022, 3, 6687-6706.	2.6	13
99	Basic Vapor Exposure for Tuning the Charge State Distribution of Proteins in Negative Electrospray Ionization: Elucidation of Mechanisms by Fluorescence Spectroscopy. <i>Journal of the American Society for Mass Spectrometry</i> , 2012, 23, 1221-1231.	1.2	12
100	Towards a one-step method for preparing silica/polymer heterodimers and dimpled polymer particles. <i>Polymer</i> , 2015, 70, 118-126.	1.8	12
101	Mass Determination of Entire Amyloid Fibrils by Using Mass Spectrometry. <i>Angewandte Chemie</i> , 2016, 128, 2386-2390.	1.6	12
102	The structure of chromophore-grafted amyloid- β ₂₈ dimers in the gas-phase: FRET-experiment guided modelling. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 9061-9069.	1.3	12
103	Catenane Structures of Homoleptic Thioglycolic Acid-Protected Gold Nanoclusters Evidenced by Ion Mobility-Mass Spectrometry and DFT Calculations. <i>Nanomaterials</i> , 2019, 9, 457.	1.9	12
104	Structural Basis of Protein Oxidation Resistance: A Lysozyme Study. <i>PLoS ONE</i> , 2014, 9, e101642.	1.1	11
105	Size and ligand effects of gold nanoclusters in alteration of organellar state and translocation of transcription factors in human primary astrocytes. <i>Nanoscale</i> , 2021, 13, 3173-3183.	2.8	11
106	Infrared laser dissociation of single megadalton polymer ions in a gated electrostatic ion trap: the added value of statistical analysis of individual events. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 11959-11966.	1.3	10
107	Atomically precise clusters of gold and silver: A new class of nonlinear optical nanomaterials. , 0, 1, 1001.		10
108	Open questions on proteins interacting with nanoclusters. <i>Communications Chemistry</i> , 2022, 5, .	2.0	10

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109	Action-Self Quenching: Dimer-Induced Fluorescence Quenching of Chromophores as a Probe for Biomolecular Structure. <i>Analytical Chemistry</i> , 2017, 89, 4604-4610.	3.2	9
110	Controlling the Chemistry of Nanoclusters: From Atomic Precision to Controlled Assembly. <i>Nanomaterials</i> , 2022, 12, 62.	1.9	8
111	In vivo evidence of the targeting of cartilaginous tissue by pyridinium functionalized nanoparticles. <i>Chemical Communications</i> , 2013, 49, 3046.	2.2	7
112	Hydrogen-Induced Adsorption of Carbon Monoxide on the Gold Dimer Cation: A Joint Experimental and DFT Investigation. <i>Journal of Physical Chemistry A</i> , 2017, 121, 4404-4411.	1.1	7
113	Rationale Strategy to Tune the Optical Properties of Gold Catenane Nanoclusters by Doping with Silver Atoms. <i>Journal of Physical Chemistry C</i> , 2020, 124, 19368-19374.	1.5	7
114	Insights into the Impact of Gold Nanoclusters Au ₁₀ SG ₁₀ on Human Microglia. <i>ACS Chemical Neuroscience</i> , 2022, 13, 464-476.	1.7	7
115	Metal-Organic frameworks encapsulated Ag Nanoparticle-Nanoclusters with enhanced luminescence for simultaneous detection and removal of Chromium(VI). <i>Microchemical Journal</i> , 2022, 181, 107722.	2.3	7
116	Direct determination of molecular weight distribution of calf thymus DNAs and study of their fragmentation under ultrasonic and low energy infrared irradiations. A charge detection mass spectrometry investigation. <i>Rapid Communications in Mass Spectrometry</i> , 2019, 33, 35-39.	0.7	6
117	Ion mobility resolved photo-fragmentation to discriminate protomers. <i>Rapid Communications in Mass Spectrometry</i> , 2019, 33, 28-34.	0.7	6
118	Regulation of Silver Nanoclusters with 4 Orders of Magnitude Variation of Fluorescence Lifetimes with Solvent-Induced Noncovalent Interaction. <i>Journal of Physical Chemistry C</i> , 2022, 126, 5198-5205.	1.5	6
119	Optical Properties of a Visible Push-Pull Chromophore Covalently Bound to Carbohydrates: Solution and Gas-Phase Spectroscopy Combined to Theoretical Investigations. <i>Journal of Physical Chemistry B</i> , 2012, 116, 841-851.	1.2	5
120	Covalent anchoring of atomically precise glutathione-protected gold nanoclusters on graphene oxide nanosheets. <i>Nano Express</i> , 2020, 1, 030005.	1.2	5
121	Random lasing in rhodamine 6G dye - Kaolinite nanoclay colloids under single shot nanosecond pumping. <i>Optical Materials</i> , 2022, 129, 112408.	1.7	5
122	Monitoring methanol-induced protein unfolding by fluorescence anisotropy measurements of covalently labelled rhodamine probe. <i>European Physical Journal D</i> , 2017, 71, 1.	0.6	4
123	One-pot direct synthesis for multifunctional ultrasmall hybrid silica nanoparticles. <i>Journal of Materials Chemistry B</i> , 2018, 6, 4821-4834.	2.9	4
124	Facile one-pot synthesis of white emitting gold nanocluster solutions composed of red, green and blue emitters. <i>Journal of Materials Chemistry C</i> , 2022, 10, 2263-2270.	2.7	4
125	Synthesis of ligated-metal species by laser vaporization electrospray ionization (LAVESI). <i>International Journal of Mass Spectrometry</i> , 2015, 387, 45-50.	0.7	3
126	Action-FRET of β -cyclodextrin inclusion complexes. <i>New Journal of Chemistry</i> , 2017, 41, 1806-1812.	1.4	3

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127	Phenyl argentate aggregates $[Ag_nPh_{n+1}]^{\sim}$ ($n = 2 \text{ à } 8$): Models for the self-assembly of atom-precise polynuclear organometallics. <i>Journal of Chemical Physics</i> , 2021, 154, 224301.	1.2	3
128	Ligand-Core NLO-Phores. <i>Challenges and Advances in Computational Chemistry and Physics</i> , 2019, , 139-160.	0.6	2
129	Charge detection mass spectrometry on human-amplified fibrils from different synucleinopathies. <i>Chemical Communications</i> , 2022, 58, 7192-7195.	2.2	1
130	Bulky Counterions: Enhancing the Two-Photon Excited Fluorescence of Gold Nanoclusters. <i>ChemPhysChem</i> , 2018, 19, 164-164.	1.0	0
131	Selected Studied Cases. <i>SpringerBriefs in Materials</i> , 2018, , 63-75.	0.1	0
132	Concluding Remarks and Outlook. <i>SpringerBriefs in Materials</i> , 2018, , 77-82.	0.1	0
133	Polymer- and dendrimer-protected metal nanoclusters. , 2022, , 223-249.		0
134	Cover Feature: Tailoring the NIR Photoluminescence of Single Thiolated Au ₂₅ Nanoclusters by Selective Binding to Proteins (<i>Chem. Eur. J.</i> 39/2022). <i>Chemistry - A European Journal</i> , 2022, 28, .	1.7	0