

Anton Plech

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

102
papers

4,912
citations

32
h-index

69
g-index

109
ext. papers

5,421
ext. citations

4.2
avg, IF

5.35
L-index

#	Paper	IF	Citations
102	Speciation in nanosecond laser ablation of zinc in water. <i>Science China: Physics, Mechanics and Astronomy</i> , 2022 , 65, 1	3.6	0
101	Photoluminescence of Fully Inorganic Colloidal Gold Nanocluster and Their Manipulation Using Surface Charge Effects. <i>Advanced Materials</i> , 2021 , 33, e2101549	24	4
100	Layer-by-Layer Spray-Coating of Cellulose Nanofibrils and Silver Nanoparticles for Hydrophilic Interfaces. <i>ACS Applied Nano Materials</i> , 2021 , 4, 503-513	5.6	14
99	Structural dynamics probed by X-ray pulses from synchrotrons and XFELs. <i>Comptes Rendus Physique</i> , 2021 , 22, 1-20	1.4	1
98	On the Optical Properties of AgAu Colloidal Alloys Pulsed Laser Ablated in Liquid: Experiments and Theory. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 24930-24939	3.8	5
97	In situ speciation and spatial mapping of Zn products during pulsed laser ablation in liquids (PLAL) by combined synchrotron methods. <i>Nanoscale</i> , 2020 , 12, 14011-14020	7.7	15
96	In situ structural kinetics of picosecond laser-induced heating and fragmentation of colloidal gold spheres. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 4993-5001	3.6	20
95	Shack-Hartmann wavefront sensors based on 2D refractive lens arrays and super-resolution multi-contrast X-ray imaging. <i>Journal of Synchrotron Radiation</i> , 2020 , 27, 788-795	2.4	7
94	Nanoparticles Engineering by Pulsed Laser Ablation in Liquids: Concepts and Applications. <i>Nanomaterials</i> , 2020 , 10,	5.4	43
93	Structural and Thermal Characterisation of Nanofilms by Time-Resolved X-ray Scattering. <i>Nanomaterials</i> , 2019 , 9,	5.4	1
92	Materials synthesis in a bubble. <i>MRS Bulletin</i> , 2019 , 44, 382-391	3.2	34
91	Early appearance of crystalline nanoparticles in pulsed laser ablation in liquids dynamics. <i>Nanoscale</i> , 2019 , 11, 6962-6969	7.7	32
90	Inverted Hartmann mask for single-shot phase-contrast x-ray imaging of dynamic processes. <i>Optics Letters</i> , 2019 , 44, 2306-2309	3	6
89	Incubation Effect of Pre-Irradiation on Bubble Formation and Ablation in Laser Ablation in Liquids. <i>ChemPhysChem</i> , 2019 , 20, 1036-1043	3.2	12
88	Time and Mechanism of Nanoparticle Functionalization by Macromolecular Ligands during Pulsed Laser Ablation in Liquids. <i>Langmuir</i> , 2019 , 35, 3038-3047	4	27
87	How the re-irradiation of a single ablation spot affects cavitation bubble dynamics and nanoparticles properties in laser ablation in liquids. <i>Applied Surface Science</i> , 2019 , 473, 828-837	6.7	23
86	Scalable, large area compound array refractive lens for hard X-rays. <i>Applied Physics Letters</i> , 2018 , 112, 151903	3.4	15

85	X-ray spectroscopic and stroboscopic analysis of pulsed-laser ablation of Zn and its oxidation. <i>Applied Physics A: Materials Science and Processing</i> , 2018 , 124, 1	2.6	18
84	A Shack-Hartmann Sensor for Single-Shot Multi-Contrast Imaging with Hard X-rays. <i>Applied Sciences (Switzerland)</i> , 2018 , 8, 737	2.6	15
83	Primary particle diameter differentiation and bimodality identification by five analytical methods using gold nanoparticle size distributions synthesized by pulsed laser ablation in liquids. <i>Applied Surface Science</i> , 2018 , 435, 743-751	6.7	29
82	Size Quenching during Laser Synthesis of Colloids Happens Already in the Vapor Phase of the Cavitation Bubble. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 5356-5365	3.8	64
81	Fluence Threshold Behaviour on Ablation and Bubble Formation in Pulsed Laser Ablation in Liquids. <i>ChemPhysChem</i> , 2017 , 18, 1084-1090	3.2	34
80	Thermal dynamics of pulsed-laser excited gold nanorods in suspension. <i>Nanoscale</i> , 2017 , 9, 17284-17292	7.7	21
79	Pulsed laser ablation in liquids: Impact of the bubble dynamics on particle formation. <i>Journal of Colloid and Interface Science</i> , 2017 , 489, 106-113	9.3	70
78	Ultrashort pulse laser processing of silica at high repetition rates from network change to residual strain. <i>International Journal of Applied Glass Science</i> , 2017 , 8, 233-238	1.8	4
77	Measurement and analysis of thermal conductivity of isotopically controlled silicon layers by time-resolved X-ray scattering. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2016 , 213, 3020-3028	1.6	2
76	Target geometry and rigidity determines laser-induced cavitation bubble transport and nanoparticle productivity - a high-speed videography study. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 16585-93	3.6	32
75	Thermal Stability Studies of DySi ₂ Nanowires and Nanoislands by in Situ GISAXS. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 7365-7372	3.8	
74	Femtosecond laser written nanostructures in Ge-doped glasses. <i>Optics Letters</i> , 2016 , 41, 1161-4	3	22
73	The onset of ultrashort pulse-induced nanogratings. <i>Laser and Photonics Reviews</i> , 2016 , 10, 327-334	8.3	18
72	Ultrafast study of phonon transport in isotopically controlled semiconductor nanostructures. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2016 , 213, 541-548	1.6	5
71	Erasure and formation of femtosecond laser-induced nanostructures 2015 ,		2
70	On the rewriting of ultrashort pulse-induced nanogratings. <i>Optics Letters</i> , 2015 , 40, 2049-52	3	10
69	A hierarchical view on material formation during pulsed-laser synthesis of nanoparticles in liquid. <i>Scientific Reports</i> , 2015 , 5, 16313	4.9	116
68	A portable ultrahigh-vacuum system for advanced synchrotron radiation studies of thin films and nanostructures: EuSi ₂ nano-islands. <i>Journal of Synchrotron Radiation</i> , 2015 , 22, 91-8	2.4	7

67	Ultrashort laser pulse induced nanogratings in borosilicate glass. <i>Applied Physics Letters</i> , 2014 , 104, 211107	3.7	35
66	Thermal conductivity of isotopically controlled silicon nanostructures. <i>New Journal of Physics</i> , 2014 , 16, 015021	2.9	17
65	Structural evolution of nanopores and cracks as fundamental constituents of ultrashort pulse-induced nanogratings. <i>Applied Physics A: Materials Science and Processing</i> , 2014 , 114, 75-79	2.6	11
64	Determination of nanoscale heat conductivity by time-resolved X-ray scattering. <i>Thin Solid Films</i> , 2013 , 541, 28-31	2.2	6
63	FLUTE: a versatile linac-based THz source. <i>Review of Scientific Instruments</i> , 2013 , 84, 022705	1.7	15
62	Dynamics of silver nanoparticle formation and agglomeration inside the cavitation bubble after pulsed laser ablation in liquid. <i>Physical Chemistry Chemical Physics</i> , 2013 , 15, 3068-74	3.6	156
61	Ultrashort pulse induced nanogratings. <i>MATEC Web of Conferences</i> , 2013 , 8, 03001	0.3	
60	Ultrafast x-ray scattering on nanoparticle dynamics. <i>Journal of Physics: Conference Series</i> , 2013 , 425, 092008	0.3	1
59	Ultrafast laser pump X-ray probe experiments by means of asynchronous sampling. <i>Journal of Physics: Conference Series</i> , 2013 , 425, 092007	0.3	2
58	Nanoparticle formation in a cavitation bubble after pulsed laser ablation in liquid studied with high time resolution small angle x-ray scattering. <i>Applied Physics Letters</i> , 2012 , 101, 103104	3.4	147
57	On the fundamental structure of femtosecond laser-induced nanogratings. <i>Laser and Photonics Reviews</i> , 2012 , 6, 787-792	8.3	52
56	Vibrational symmetry breaking of supported nanospheres. <i>Physical Review B</i> , 2012 , 86,	3.3	12
55	Structural study of near-field ablation close to plasmon-resonant nanotriangles. <i>Journal of Laser Applications</i> , 2012 , 24, 042015	2.1	6
54	Reduced thermal conductivity of isotopically modulated silicon multilayer structures. <i>Applied Physics Letters</i> , 2012 , 101, 064103	3.4	14
53	Lattice Dynamics of Laser Excited Ferroelectric BaTiO ₃ . <i>Acta Physica Polonica A</i> , 2012 , 121, 319-323	0.6	4
52	Thermodynamics of nanosecond nanobubble formation at laser-excited metal nanoparticles. <i>New Journal of Physics</i> , 2011 , 13, 043018	2.9	113
51	Femtosecond and picosecond near-field ablation of gold nanotriangles: nanostructuring and nanomelting. <i>Applied Physics A: Materials Science and Processing</i> , 2011 , 104, 793-799	2.6	18
50	Asynchronous sampling for ultrafast experiments with low momentum compaction at the ANKA ring. <i>Journal of Synchrotron Radiation</i> , 2011 , 18, 539-45	2.4	8

49	Ultrafast structural dynamics of the photocleavage of protein hybrid nanoparticles. <i>ACS Nano</i> , 2011 , 5, 3788-94	16.7	42
48	Guest Controlled Assembly of Gold Nanoparticles Coated with Calix[4]arene Hosts. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 13601-13607	3.8	30
47	Gold nanoparticle membranes as large-area surface monolayers. <i>Journal of Colloid and Interface Science</i> , 2010 , 346, 1-7	9.3	15
46	Chopper system for time resolved experiments with synchrotron radiation. <i>Review of Scientific Instruments</i> , 2009 , 80, 015101	1.7	90
45	Femtosecond laser near field ablation. <i>Laser and Photonics Reviews</i> , 2009 , 3, 435-451	8.3	50
44	Growth Kinetic of a Rod-Shaped Metal Nanocrystal. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 10390-10394	3.4	45
43	Structural kinetics in protein-coated gold nanoparticles probed by time-resolved x-ray scattering. <i>Springer Series in Chemical Physics</i> , 2009 , 134-136	0.3	2
42	Kinetics of the X-ray induced gold nanoparticle synthesis. <i>Physical Chemistry Chemical Physics</i> , 2008 , 10, 3888-94	3.6	40
41	Ultrafast X-ray solution scattering reveals an unknown reaction intermediate in the photolysis of [Ru ₃ (CO) ₁₂]. <i>Angewandte Chemie - International Edition</i> , 2008 , 47, 5550-3	16.4	39
40	Ultrafast X-Ray Solution Scattering Reveals an Unknown Reaction Intermediate in the Photolysis of [Ru ₃ (CO) ₁₂]. <i>Angewandte Chemie</i> , 2008 , 120, 5632-5635	3.6	4
39	Small-angle pump-probe studies of photoexcited nanoparticles. <i>Journal of Synchrotron Radiation</i> , 2007 , 14, 288-94	2.4	13
38	Picosecond Diffraction at the ESRF: How Far Have We Come and Where Are We Going?. <i>AIP Conference Proceedings</i> , 2007 ,	0	5
37	High-speed asynchronous optical sampling for high-sensitivity detection of coherent phonons. <i>Journal of Physics: Conference Series</i> , 2007 , 92, 012005	0.3	1
36	Dynamics of the laser-induced ferroelectric excitation in BaTiO ₃ studied by x-ray diffraction. <i>Applied Physics Letters</i> , 2007 , 90, 022905	3.4	13
35	A surface phase transition of supported gold nanoparticles. <i>Nano Letters</i> , 2007 , 7, 1026-31	11.5	71
34	Spatiotemporal reaction kinetics of an ultrafast photoreaction pathway visualized by time-resolved liquid x-ray diffraction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 9410-5	11.5	55
33	Excitation of nanoscale vapor bubbles at the surface of gold nanoparticles in water. <i>Journal of Chemical Physics</i> , 2006 , 124, 184702	3.9	201
32	Recombination of photodissociated iodine: a time-resolved x-ray-diffraction study. <i>Journal of Chemical Physics</i> , 2006 , 124, 034501	3.9	53

31	Femtosecond laser near-field ablation from gold nanoparticles. <i>Nature Physics</i> , 2006 , 2, 44-47	16.2	199
30	Turkevich method for gold nanoparticle synthesis revisited. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 15700-7	3.4	1521
29	Cavitation dynamics on the nanoscale. <i>Applied Physics Letters</i> , 2005 , 87, 213102	3.4	147
28	Thermal dynamics in laser excited metal nanoparticles. <i>Chemical Physics Letters</i> , 2005 , 401, 565-569	2.5	55
27	Structural Determination of a Transient Isomer of CH ₂ I ₂ by Picosecond X-Ray Diffraction. <i>Physical Review Letters</i> , 2005 , 94,	7.4	84
26	Picosecond x-ray studies of coherent folded acoustic phonons in a multiple quantum well. <i>Physical Review Letters</i> , 2005 , 94, 125509	7.4	29
25	Light-induced structural phase behaviour of metal nanoparticle materials. <i>Journal of Physics: Conference Series</i> , 2005 , 21, 50-55	0.3	5
24	Probing photoinduced phase transition in a charge-transfer molecular crystal by 100 picosecond X-ray diffraction. <i>Chemical Physics</i> , 2004 , 299, 163-170	2.3	49
23	Structural kinetics of laser-excited metal nanoparticles supported on a surface. <i>Chemical Physics</i> , 2004 , 299, 183-191	2.3	14
22	X-ray filming of atomic motions in chemical reactions. <i>Chemical Physics</i> , 2004 , 304, 245-251	2.3	30
21	Laser-induced heating and melting of gold nanoparticles studied by time-resolved x-ray scattering. <i>Physical Review B</i> , 2004 , 70,	3.3	218
20	Time-resolved x-ray diffraction from small molecules in solution 2004 , 337-347		3
19	Time-dependent x-ray scattering signal of laser heated liquids 2004 , 349-352		4
18	Visualizing chemical reactions in solution by picosecond x-ray diffraction. <i>Physical Review Letters</i> , 2004 , 92, 125505	7.4	110
17	Determination of structure in liquid solutions - implications for picosecond photoexcitation studies. <i>Journal of Physics Condensed Matter</i> , 2003 , 15, S137-S143	1.8	1
16	A new apparatus for the measurement of X-ray absorption by flame generated particles. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2003 , 207, 227-231	1.2	4
15	The realization of sub-nanosecond pump and probe experiments at the ESRF. European Synchrotron Radiation Facility. <i>Faraday Discussions</i> , 2003 , 122, 13-26; discussion 79-88	3.6	79
14	Time-resolved X-ray diffraction on laser-excited metal nanoparticles. <i>Europhysics Letters</i> , 2003 , 61, 762-768		44

13	First investigations of the kinetics of the topochemical reaction of p-formyl-trans-cinnamic acid by time-resolved X-ray diffraction. <i>Faraday Discussions</i> , 2003 , 122, 105-17; discussion 171-90	3.6	28
12	Nanosecond time-resolved crystallography of photo-induced species: case study and instrument development for high-resolution excited-state single-crystal structure determination. <i>Faraday Discussions</i> , 2003 , 122, 119-29; discussion 171-90	3.6	17
11	Diffuse scattering from liquid solutions with white-beam undulator radiation for photoexcitation studies. <i>Journal of Synchrotron Radiation</i> , 2002 , 9, 287-92	2.4	21
10	Solid-liquid interface of a 2-propanol-perfluoromethylcyclohexane mixture: from adsorption to wetting. <i>Physical Review E</i> , 2002 , 65, 061604	2.4	9
9	The toroidal mirror for single-pulse experiments on ID09B 2002 , 4782, 246		1
8	Direct time-resolved studies of photochemical reactions in liquids by X-ray scattering. <i>Journal of Luminescence</i> , 2001 , 94-95, 493-498	3.8	9
7	Wetting transition and pretransitional thin films in binary liquids: alcohol/perfluoromethylcyclohexane mixtures studied by x-ray reflectivity. <i>Journal of Physics Condensed Matter</i> , 2001 , 13, 5563-5576	1.8	6
6	Investigation of Structure and Growth of Self-Assembled Polyelectrolyte Layers by X-ray and Neutron Scattering under Grazing Angles. <i>Journal of Colloid and Interface Science</i> , 2000 , 223, 74-82	9.3	29
5	Wetting transition of a binary liquid mixture at a solid boundary. <i>Europhysics Letters</i> , 2000 , 49, 583-589	1.6	17
4	Self-assembled thin films of organo-metal complexes. <i>Thin Solid Films</i> , 1999 , 354, 208-214	2.2	17
3	Monolayer of metallo-supramolecular complexes. <i>Chemical Communications</i> , 1998 , 2731-2732	5.8	17
2	In situ x-ray reflectivity study of the oxidation kinetics of liquid gallium and the liquid alloy. <i>Journal of Physics Condensed Matter</i> , 1998 , 10, 971-982	1.8	30
1	Compressibility of tugtupite at high pressure. <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 1995 , 210, 418-420	1	1