

# Anton Plech

## List of Publications by Year in descending order

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108  
papers

5,924  
citations

101384

36  
h-index

71532

76  
g-index

109  
all docs

109  
docs citations

109  
times ranked

7434  
citing authors

#	ARTICLE	IF	CITATIONS
1	Speciation in nanosecond laser ablation of zinc in water. <i>Science China: Physics, Mechanics and Astronomy</i> , 2022, 65, 1.	2.0	3
2	Layer-by-Layer Spray-Coating of Cellulose Nanofibrils and Silver Nanoparticles for Hydrophilic Interfaces. <i>ACS Applied Nano Materials</i> , 2021, 4, 503-513.	2.4	24
3	Photoluminescence of Fully Inorganic Colloidal Gold Nanocluster and Their Manipulation Using Surface Charge Effects. <i>Advanced Materials</i> , 2021, 33, e2101549.	11.1	21
4	Structural dynamics probed by X-ray pulses from synchrotrons and XFELs. <i>Comptes Rendus Physique</i> , 2021, 22, 75-94.	0.3	2
5	Nanoparticles Engineering by Pulsed Laser Ablation in Liquids: Concepts and Applications. <i>Nanomaterials</i> , 2020, 10, 2317.	1.9	140
6	On the Optical Properties of Ag-Au Colloidal Alloys Pulsed Laser Ablated in Liquid: Experiments and Theory. <i>Journal of Physical Chemistry C</i> , 2020, 124, 24930-24939.	1.5	10
7	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.	2.8	19
8	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.	1.3	40
9	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.	1.0	15
10	Structural and Thermal Characterisation of Nanofilms by Time-Resolved X-ray Scattering. <i>Nanomaterials</i> , 2019, 9, 501.	1.9	3
11	Materials synthesis in a bubble. <i>MRS Bulletin</i> , 2019, 44, 382-391.	1.7	60
12	Early appearance of crystalline nanoparticles in pulsed laser ablation in liquids dynamics. <i>Nanoscale</i> , 2019, 11, 6962-6969.	2.8	46
13	Incubation Effect of Pre-irradiation on Bubble Formation and Ablation in Laser Ablation in Liquids. <i>ChemPhysChem</i> , 2019, 20, 1036-1043.	1.0	17
14	Time and Mechanism of Nanoparticle Functionalization by Macromolecular Ligands during Pulsed Laser Ablation in Liquids. <i>Langmuir</i> , 2019, 35, 3038-3047.	1.6	44
15	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.	3.1	32
16	Inverted Hartmann mask for single-shot phase-contrast x-ray imaging of dynamic processes. <i>Optics Letters</i> , 2019, 44, 2306.	1.7	7
17	2D lens array for multi-contrast X-ray imaging. , 2019, , .		0
18	Scalable, large area compound array refractive lens for hard X-rays. <i>Applied Physics Letters</i> , 2018, 112, .	1.5	18

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19	X-ray spectroscopic and stroboscopic analysis of pulsed-laser ablation of Zn and its oxidation. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	19
20	Primary particle diameter differentiation and bimodality identification by five analytical methods using gold nanoparticle size distributions synthesized by pulsed laser ablation in liquids. Applied Surface Science, 2018, 435, 743-751.	3.1	35
21	A Shack-Hartmann Sensor for Single-Shot Multi-Contrast Imaging with Hard X-rays. Applied Sciences (Switzerland), 2018, 8, 737.	1.3	20
22	Size Quenching during Laser Synthesis of Colloids Happens Already in the Vapor Phase of the Cavitation Bubble. Journal of Physical Chemistry C, 2017, 121, 5356-5365.	1.5	79
23	Fluence Threshold Behaviour on Ablation and Bubble Formation in Pulsed Laser Ablation in Liquids. ChemPhysChem, 2017, 18, 1084-1090.	1.0	41
24	Thermal dynamics of pulsed-laser excited gold nanorods in suspension. Nanoscale, 2017, 9, 17284-17292.	2.8	29
25	Pulsed laser ablation in liquids: Impact of the bubble dynamics on particle formation. Journal of Colloid and Interface Science, 2017, 489, 106-113.	5.0	84
26	Ultrashort pulse laser processing of silica at high repetition ratesâ€”from network change to residual strain. International Journal of Applied Glass Science, 2017, 8, 233-238.	1.0	6
27	The onset of ultrashort pulseâ€”induced nanogratings. Laser and Photonics Reviews, 2016, 10, 327-334.	4.4	28
28	Ultrafast study of phonon transport in isotopically controlled semiconductor nanostructures. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 541-548.	0.8	5
29	Measurement and analysis of thermal conductivity of isotopically controlled silicon layers by timeâ€”resolved Xâ€”ray scattering. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 3020-3028.	0.8	2
30	Target geometry and rigidity determines laser-induced cavitation bubble transport and nanoparticle productivity â€” a high-speed videography study. Physical Chemistry Chemical Physics, 2016, 18, 16585-16593.	1.3	40
31	Thermal Stability Studies of DySi <sub>2</sub> Nanowires and Nanoislands by in Situ GISAXS. Journal of Physical Chemistry C, 2016, 120, 7365-7372.	1.5	0
32	Femtosecond laser written nanostructures in Ge-doped glasses. Optics Letters, 2016, 41, 1161.	1.7	30
33	A hierarchical view on material formation during pulsed-laser synthesis of nanoparticles in liquid. Scientific Reports, 2015, 5, 16313.	1.6	132
34	A portable ultrahigh-vacuum system for advanced synchrotron radiation studies of thin films and nanostructures: EuSi <sub>2</sub> nano-islands. Journal of Synchrotron Radiation, 2015, 22, 91-98.	1.0	11
35	Erasure and formation of femtosecond laser-induced nanostructures. , 2015, , .		2
36	On the rewriting of ultrashort pulse-induced nanogratings. Optics Letters, 2015, 40, 2049.	1.7	12

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37	Thermal conductivity of isotopically controlled silicon nanostructures. <i>New Journal of Physics</i> , 2014, 16, 015021.	1.2	21
38	Formation and evolution of ultrashort pulse-induced nanogratings in Borosilicate glass. , 2014, , .		0
39	Morphological evolution of nanopores and cracks as fundamental components of ultrashort pulse laser-induced nanogratings. , 2014, , .		0
40	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.	1.1	14
41	Ultrashort laser pulse induced nanogratings in borosilicate glass. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	48
42	Determination of nanoscale heat conductivity by time-resolved X-ray scattering. <i>Thin Solid Films</i> , 2013, 541, 28-31.	0.8	6
43	FLUTE: A versatile linac-based THz source. <i>Review of Scientific Instruments</i> , 2013, 84, 022705.	0.6	18
44	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, 3068-3074.	1.3	174
45	The underlying structure of ultrashort pulse laser-induced nanogratings. , 2013, , .		1
46	Ultrafast x-ray scattering on nanoparticle dynamics. <i>Journal of Physics: Conference Series</i> , 2013, 425, 092008.	0.3	2
47	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
48	Ultrashort pulse induced nanogratings. <i>MATEC Web of Conferences</i> , 2013, 8, 03001.	0.1	0
49	Vibrational symmetry breaking of supported nanospheres. <i>Physical Review B</i> , 2012, 86, .	1.1	13
50	Structural study of near-field ablation close to plasmon-resonant nanotriangles. <i>Journal of Laser Applications</i> , 2012, 24, .	0.8	6
51	Reduced thermal conductivity of isotopically modulated silicon multilayer structures. <i>Applied Physics Letters</i> , 2012, 101, 064103.	1.5	14
52	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.	1.5	168
53	On the fundamental structure of femtosecond laser-induced nanogratings. <i>Laser and Photonics Reviews</i> , 2012, 6, 787-792.	4.4	61
54	Lattice Dynamics of Laser Excited Ferroelectric BaTiO <sub>3</sub> . <i>Acta Physica Polonica A</i> , 2012, 121, 319-323.	0.2	5

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55	Ultrafast Structural Dynamics of the Photocleavage of Protein Hybrid Nanoparticles. ACS Nano, 2011, 5, 3788-3794.	7.3	45
56	Thermodynamics of nanosecond nanobubble formation at laser-excited metal nanoparticles. New Journal of Physics, 2011, 13, 043018.	1.2	138
57	Femtosecond and picosecond near-field ablation of gold nanotriangles: nanostructuring and nanomelting. Applied Physics A: Materials Science and Processing, 2011, 104, 793-799.	1.1	20
58	Asynchronous sampling for ultrafast experiments with low momentum compaction at the ANKA ring. Journal of Synchrotron Radiation, 2011, 18, 539-545.	1.0	8
59	Gold nanoparticle membranes as large-area surface monolayers. Journal of Colloid and Interface Science, 2010, 346, 1-7.	5.0	17
60	Guest Controlled Assembly of Gold Nanoparticles Coated with Calix[4]arene Hosts. Journal of Physical Chemistry C, 2010, 114, 13601-13607.	1.5	30
61	Chopper system for time resolved experiments with synchrotron radiation. Review of Scientific Instruments, 2009, 80, 015101.	0.6	106
62	Femtosecond laser near field ablation. Laser and Photonics Reviews, 2009, 3, 435-451.	4.4	64
63	Growth Kinetic of a Rod-Shaped Metal Nanocrystal. Journal of Physical Chemistry C, 2009, 113, 10390-10394.	1.5	48
64	Structural kinetics in protein-coated gold nanoparticles probed by time-resolved x-ray scattering. Springer Series in Chemical Physics, 2009, , 134-136.	0.2	2
65	Ultrafast X-ray Solution Scattering Reveals an Unknown Reaction Intermediate in the Photolysis of [Ru <sub>3</sub> (CO) <sub>12</sub> ]. Angewandte Chemie - International Edition, 2008, 47, 5550-5553.	7.2	48
66	Kinetics of the X-ray induced gold nanoparticle synthesis. Physical Chemistry Chemical Physics, 2008, 10, 3888.	1.3	47
67	Dynamics of laser-excited nanoparticles. Proceedings of SPIE, 2008, , .	0.8	0
68	Picosecond Diffraction at the ESRF: How Far Have We Come and Where Are We Going?. AIP Conference Proceedings, 2007, , .	0.3	6
69	High-speed asynchronous optical sampling for high-sensitivity detection of coherent phonons. Journal of Physics: Conference Series, 2007, 92, 012005.	0.3	1
70	Dynamics of the laser-induced ferroelectric excitation in BaTiO <sub>3</sub> studied by x-ray diffraction. Applied Physics Letters, 2007, 90, 022905.	1.5	14
71	A Surface Phase Transition of Supported Gold Nanoparticles. Nano Letters, 2007, 7, 1026-1031.	4.5	76
72	Small-angle pump-probe studies of photoexcited nanoparticles. Journal of Synchrotron Radiation, 2007, 14, 288-294.	1.0	14

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73	Excitation of nanoscale vapor bubbles at the surface of gold nanoparticles in water. Journal of Chemical Physics, 2006, 124, 184702.	1.2	230
74	Recombination of photodissociated iodine: A time-resolved x-ray-diffraction study. Journal of Chemical Physics, 2006, 124, 034501.	1.2	59
75	Picosecond x-ray studies of coherent folded acoustic phonons in a periodic semiconductor heterostructure. , 2006, , .		0
76	Femtosecond laser near-field ablation from gold nanoparticles. Nature Physics, 2006, 2, 44-47.	6.5	227
77	Turkevich Method for Gold Nanoparticle Synthesis Revisited. Journal of Physical Chemistry B, 2006, 110, 15700-15707.	1.2	1,822
78	Spatiotemporal reaction kinetics of an ultrafast photoreaction pathway visualized by time-resolved liquid x-ray diffraction. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 9410-9415.	3.3	64
79	Thermal dynamics in laser excited metal nanoparticles. Chemical Physics Letters, 2005, 401, 565-569.	1.2	62
80	Structural Determination of a Transient Isomer of CH <sub>2</sub> I <sub>2</sub> by Picosecond X-Ray Diffraction. Physical Review Letters, 2005, 94, .	2.9	93
81	Picosecond X-Ray Studies of Coherent Folded Acoustic Phonons in a Multiple Quantum Well. Physical Review Letters, 2005, 94, 125509.	2.9	31
82	Light-induced structural phase behaviour of metal nanoparticle materials. Journal of Physics: Conference Series, 2005, 21, 50-55.	0.3	5
83	Cavitation dynamics on the nanoscale. Applied Physics Letters, 2005, 87, 213102.	1.5	161
84	Time Resolved X-ray Diffraction and Non-Thermal Inelastic X-ray Scattering. AIP Conference Proceedings, 2004, , .	0.3	1
85	Probing photoinduced phase transition in a charge-transfer molecular crystal by 100 picosecond X-ray diffraction. Chemical Physics, 2004, 299, 163-170.	0.9	51
86	Structural kinetics of laser-excited metal nanoparticles supported on a surface. Chemical Physics, 2004, 299, 183-191.	0.9	16
87	X-ray "filming" of atomic motions in chemical reactions. Chemical Physics, 2004, 304, 245-251.	0.9	31
88	Laser-induced heating and melting of gold nanoparticles studied by time-resolved x-ray scattering. Physical Review B, 2004, 70, .	1.1	252
89	Time-resolved x-ray diffraction from small molecules in solution. , 2004, , 337-347.		3
90	Time-dependent x-ray scattering signal of laser heated liquids. , 2004, , 349-352.		4

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91	Visualizing Chemical Reactions in Solution by Picosecond X-Ray Diffraction. <i>Physical Review Letters</i> , 2004, 92, 125505.	2.9	123
92	A new apparatus for the measurement of X-ray absorption by flame generated particles. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2003, 207, 227-231.	0.6	4
93	The realization of sub-nanosecond pump and probe experiments at the ESRF. <i>Faraday Discussions</i> , 2003, 122, 13-26.	1.6	86
94	Time-resolved X-ray diffraction on laser-excited metal nanoparticles. <i>Europhysics Letters</i> , 2003, 61, 762-768.	0.7	44
95	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, 105-117.	1.6	38
96	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, 119-129.	1.6	17
97	Determination of structure in liquid solutions - implications for picosecond photoexcitation studies. <i>Journal of Physics Condensed Matter</i> , 2003, 15, S137-S143.	0.7	1
98	Solid-liquid interface of a 2-propanol/perfluoromethylcyclohexane mixture: From adsorption to wetting. <i>Physical Review E</i> , 2002, 65, 061604.	0.8	10
99	The toroidal mirror for single-pulse experiments on ID09B. , 2002, 4782, 246.		3
100	Diffuse scattering from liquid solutions with white-beam undulator radiation for photoexcitation studies. <i>Journal of Synchrotron Radiation</i> , 2002, 9, 287-292.	1.0	21
101	Direct time-resolved studies of photochemical reactions in liquids by X-ray scattering. <i>Journal of Luminescence</i> , 2001, 94-95, 493-498.	1.5	10
102	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.	0.7	7
103	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.	5.0	30
104	Wetting transition of a binary liquid mixture at a solid boundary. <i>Europhysics Letters</i> , 2000, 49, 583-589.	0.7	17
105	Self-assembled thin films of organo-metal complexes. <i>Thin Solid Films</i> , 1999, 354, 208-214.	0.8	17
106	Monolayer of metallo-supramolecular complexes. <i>Chemical Communications</i> , 1998, , 2731-2732.	2.2	23
107	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.	0.7	41
108	Compressibility of tugtupite at high pressure. <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 1995, 210, 418-420.	0.4	3