Bohdan I Senyuk

List of Publications by Citations

49 papers	1,888 citations	28 h-index	43 g-index
49 ext. papers	2,132 ext. citations	10.4 avg, IF	4.86 L-index

#	Paper	IF	Citations
49	Topological colloids. *Nature*, **2013**, 493, 200-5	50.4	236
48	Shape-dependent oriented trapping and scaffolding of plasmonic nanoparticles by topological defects for self-assembly of colloidal dimers in liquid crystals. *Nano Letters*, **2012**, 12, 955-63	11.5	112
47	Two-dimensional skyrmions and other solitonic structures in confinement-frustrated chiral nematics. *Physical Review E*, **2014**, 90, 012505	2.4	91
46	Electric-field-induced nematic-cholesteric transition and three-dimensional director structures in homeotropic cells. *Physical Review E*, **2005**, 72, 061707	2.4	82
45	Triclinic nematic colloidal crystals from competing elastic and electrostatic interactions. *Science*, **2016**, 352, 69-73	33.3	71
44	Switchable two-dimensional gratings based on field-induced layer undulations in cholesteric liquid crystals. *Optics Letters*, **2005**, 30, 349-51	3	67
43	Optical manipulation of shape-morphing elastomeric liquid crystal microparticles doped with gold nanocrystals. *Applied Physics Letters*, **2012**, 100, 241901	3.4	64
42	Molecular reorientation of a nematic liquid crystal by thermal expansion. *Nature Communications*, **2012**, 3, 1133	17.4	64
41	Nematic liquid crystal boojums with handles on colloidal handlebodies. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 9231-6	11.5	62
40	Plasmonic complex fluids of nematiclike and helicoidal self-assemblies of gold nanorods with a negative order parameter. *Physical Review Letters*, **2012**, 109, 088301	7.4	57
39	Surface alignment, anchoring transitions, optical properties, and topological defects in the nematic phase of thermotropic bent-core liquid crystal A131. *Physical Review E*, **2010**, 82, 041711	2.4	57
38	Reconfigurable interactions and three-dimensional patterning of colloidal particles and defects in lamellar soft media. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 4744-9	11.5	52
37	Undulations of lamellar liquid crystals in cells with finite surface anchoring near and well above the threshold. *Physical Review E*, **2006**, 74, 011712	2.4	52
36	Search for biaxiality in a shape-persistent bent-core nematic liquid crystal. *Soft Matter*, **2012**, 8, 8880	3.6	51
35	Three-dimensional patterning of solid microstructures through laser reduction of colloidal graphene oxide in liquid-crystalline dispersions. *Nature Communications*, **2015**, 6, 7157	17.4	47
34	Experimental realization of crossover in shape and director field of nematic tactoids. *Physical Review E*, **2015**, 91, 042507	2.4	46
33	Chiral liquid crystal colloids. *Nature Materials*, **2018**, 17, 71-79	27	44

32	Hybrid molecular-colloidal liquid crystals. *Science*, **2018**, 360, 768-771	33.3	44
31	Cellulose-Based Reflective Liquid Crystal Films as Optical Filters and Solar Gain Regulators. *ACS Photonics*, **2018**, 5, 2468-2477	6.3	41
30	Towards template-assisted assembly of nematic colloids. *Physical Review Letters*, **2014**, 112, 225501	7.4	39
29	Rotational and translational diffusion of anisotropic gold nanoparticles in liquid crystals controlled by varying surface anchoring. *Physical Review E*, **2013**, 88, 062507	2.4	39
28	Colloidal micromotor in smectic A liquid crystal driven by DC electric field. *Soft Matter*, **2008**, 4, 2471	3.6	38
27	Active shape-morphing elastomeric colloids in short-pitch cholesteric liquid crystals. *Physical Review Letters*, **2013**, 110, 187802	7.4	37
26	Geometry-guided colloidal interactions and self-tiling of elastic dipoles formed by truncated pyramid particles in liquid crystals. *Physical Review E*, **2015**, 91, 040501	2.4	35
25	Hexadecapolar colloids. *Nature Communications*, **2016**, 7, 10659	17.4	35
24	Nonlinear photoluminescence imaging of isotropic and liquid crystalline dispersions of graphene oxide. *ACS Nano*, **2012**, 6, 8060-6	16.7	34
23	Surface Alignment, Anchoring Transitions, Optical Properties and Topological Defects in Nematic Bent-Core Materials C7 and C12. *Molecular Crystals and Liquid Crystals*, **2011**, 540, 20-41	0.5	32
22	Optical Trapping, Manipulation, and 3D Imaging of Disclinations in Liquid Crystals and Measurement of their Line Tension. *Molecular Crystals and Liquid Crystals*, **2006**, 450, 79/[279]-95/[295]	0.5	32
21	Surface alignment, anchoring transitions, optical properties, and topological defects in the thermotropic nematic phase of organo-siloxane tetrapodes. *Soft Matter*, **2014**, 10, 500-9	3.6	26
20	Magnetically responsive gourd-shaped colloidal particles in cholesteric liquid crystals. *Soft Matter*, **2014**, 10, 6014-23	3.6	26
19	Elastic colloidal monopoles and reconfigurable self-assembly in liquid crystals. *Nature*, **2019**, 570, 214-218	50.4	23
18	Elastic interactions between colloidal microspheres and elongated convex and concave nanoprisms in nematic liquid crystals. *Soft Matter*, **2012**, 8, 8729	3.6	22
17	Edge pinning and transformation of defect lines induced by faceted colloidal rings in nematic liquid crystals. *Physical Review E*, **2016**, 93, 062704	2.4	15
16	Electrostatically controlled surface boundary conditions in nematic liquid crystals and colloids. *Science Advances*, **2019**, 5, eaax4257	14.3	13
15	Degenerate conic anchoring and colloidal elastic dipole-hexadecapole transformations. *Nature Communications*, **2019**, 10, 1000	17.4	13

14	Colloidal spirals in nematic liquid crystals. *Soft Matter*, **2015**, 11, 8758-67	3.6	11
13	Self-assembly of colloidal particles in deformation landscapes of electrically driven layer undulations in cholesteric liquid crystals. *Physical Review E*, **2016**, 94, 042709	2.4	11
12	High-order elastic multipoles as colloidal atoms. *Nature Communications*, **2019**, 10, 1825	17.4	10
11	Electric switching of visible and infrared transmission using liquid crystals co-doped with plasmonic gold nanorods and dichroic dyes. *Optics Express*, **2018**, 26, 22264-22272	3.3	10
10	Repulsion-attraction switching of nematic colloids formed by liquid crystal dispersions of polygonal prisms. *Soft Matter*, **2017**, 13, 7398-7405	3.6	8
9	Aerogel from Sustainably Grown Bacterial Cellulose Pellicles as a Thermally Insulative Film for Building Envelopes. *ACS Applied Materials & Interfaces*, **2020**, 12, 34115-34121	9.5	7
8	Optical Microscopy of Soft Matter Systems **2016**, 165-186		6
7	Optically and elastically assembled plasmonic nanoantennae for spatially resolved characterization of chemical composition in soft matter systems using surface enhanced spontaneous and stimulated Raman scattering. *Journal of Applied Physics*, **2014**, 116, 063511	2.5	5
6	Optical manifestation of thermal expansion of a nematic liquid crystal **2012**,		5
5	Anisotropic electrostatic screening of charged colloids in nematic solvents. *Science Advances*, **2021**, 7,	14.3	5
4	Interplay of Electrostatic Dipoles and Monopoles with Elastic Interactions in Nematic Liquid Crystal Nanocolloids. *Nano Letters*, **2020**, 20, 7835-7843	11.5	4
3	Nematic Order, Plasmonic Switching and Self-Patterning of Colloidal Gold Bipyramids. *Advanced Science*, **2021**, 8, e2102854	13.6	4
2	Transformation between elastic dipoles, quadrupoles, octupoles, and hexadecapoles driven by surfactant self-assembly in nematic emulsion. *Science Advances*, **2021**, 7,	14.3	3
1	Electrically Powered Locomotion of Dual-Nature Colloid-Hedgehog and Colloid-Umbilic Topological and Elastic Dipoles in Liquid Crystals.. *Langmuir*, **2022**, 38, 689-697	4	0