Ivan I Smalyukh

List of Publications by Year in descending order

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227 papers 10,654 citations

23567 58 h-index 91 g-index

229 all docs 229 docs citations

times ranked

229

7582 citing authors

| # | Article | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Electrically Powered Locomotion of Dual-Nature Colloid-Hedgehog and Colloid-Umbilic Topological and Elastic Dipoles in Liquid Crystals. Langmuir, 2022, 38, 689-697. | 3.5 | 3 |
| 2 | Hopfions, heliknotons, skyrmions, torons and both abelian and nonabelian vortices in chiral liquid crystals. Liquid Crystals Reviews, 2022, 10, 34-68. | 4.1 | 20 |
| 3 | A site-differentiated [4Fe–4S] cluster controls electron transfer reactivity of <i>Clostridium acetobutylicum</i> [FeFe]-hydrogenase I. Chemical Science, 2022, 13, 4581-4588. | 7.4 | 8 |
| 4 | Cellulose nanocrystal chiral photonic micro-flakes for multilevel anti-counterfeiting and identification. Chemical Engineering Journal, 2022, 446, 136630. | 12.7 | 23 |
| 5 | Geometric transformation and three-dimensional hopping of Hopf solitons. Nature Communications, 2022, 13, . | 12.8 | 11 |
| 6 | Interaction and co-assembly of optical and topological solitons. Nature Photonics, 2022, 16, 454-461. | 31.4 | 18 |
| 7 | Fabrication of Arrays of Topological Solitons in Patterned Chiral Liquid Crystals for Realâ€√ime Observation of Morphogenesis. Advanced Materials, 2022, 34, . | 21.0 | 11 |
| 8 | Biotropic liquid crystal phase transformations in cellulose-producing bacterial communities. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, . | 7.1 | 6 |
| 9 | Thermal Management by Engineering the Alignment of Nanocellulose. Advanced Materials, 2021, 33, e2001228. | 21.0 | 43 |
| 10 | Anisotropic electrostatic screening of charged colloids in nematic solvents. Science Advances, 2021, 7, . | 10.3 | 11 |
| 11 | Thermally reconfigurable monoclinic nematic colloidal fluids. Nature, 2021, 590, 268-274. | 27.8 | 25 |
| 12 | Self-organization of nanoparticles and molecules in periodic Liesegang-type structures. Science Advances, 2021, 7, . | 10.3 | 16 |
| 13 | Transformation between elastic dipoles, quadrupoles, octupoles, and hexadecapoles driven by surfactant self-assembly in nematic emulsion. Science Advances, 2021, 7, . | 10.3 | 9 |
| 14 | Cylindrical Confinement of Nanocolloidal Cholesteric Liquid Crystal. Journal of Physical Chemistry B, 2021, 125, 8243-8250. | 2.6 | 9 |
| 15 | Nematoelasticity of hybrid molecular-colloidal liquid crystals. Physical Review E, 2021, 104, 014703. | 2.1 | 3 |
| 16 | Field-driven metamorphoses of isolated skyrmions within the conical state of cubic helimagnets. Physical Review B, 2021, 104, . | 3.2 | 21 |
| 17 | Nematic Order, Plasmonic Switching and Selfâ€Patterning of Colloidal Gold Bipyramids. Advanced Science, 2021, 8, e2102854. | 11.2 | 11 |
| 18 | Elastomeric nematic colloids, colloidal crystals and microstructures with complex topology. Soft Matter, 2021, 17, 3037-3046. | 2.7 | 3 |

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| 19 | Morphological and Orientational Controls of Self-Assembly of Gold Nanorods Directed by Evaporative Microflows. ACS Applied Materials & Interfaces, 2021, , . | 8.0 | 4 |
| 20 | Colloidal interactions and unusual crystallization versus de-mixing of elastic multipoles formed by gold mesoflowers. Nature Communications, 2020, 11, 188. | 12.8 | 8 |
| 21 | Topological solitons, cholesteric fingers and singular defect lines in Janus liquid crystal shells. Soft Matter, 2020, 16, 2669-2682. | 2.7 | 20 |
| 22 | Chiral Carbon Dots Synthesized on Cellulose Nanocrystals. Advanced Optical Materials, 2020, 8, 1901911. | 7.3 | 61 |
| 23 | Chirality-Enhanced Periodic Self-Focusing of Light in Soft Birefringent Media. Physical Review Letters, 2020, 125, 077801. | 7.8 | 9 |
| 24 | Hopf Solitons in Helical and Conical Backgrounds of Chiral Magnetic Solids. Physical Review Letters, 2020, 125, 057201. | 7.8 | 32 |
| 25 | Interplay of Electrostatic Dipoles and Monopoles with Elastic Interactions in Nematic Liquid Crystal Nanocolloids. Nano Letters, 2020, 20, 7835-7843. | 9.1 | 7 |
| 26 | Control of Light by Topological Solitons in Soft Chiral Birefringent Media. Physical Review X, 2020, 10, . | 8.9 | 19 |
| 27 | Highly Luminescent Liquid Crystals in Aggregation Based on Platinum(II) Complexes. ACS Applied Materials & Samp; Interfaces, 2020, 12, 53058-53066. | 8.0 | 23 |
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| 29 | Aerogel from Sustainably Grown Bacterial Cellulose Pellicles as a Thermally Insulative Film for Building Envelopes. ACS Applied Materials & Samp; Interfaces, 2020, 12, 34115-34121. | 8.0 | 29 |
| 30 | Surface anchoring as a control parameter for stabilizing torons, skyrmions, twisted walls, fingers, and their hybrids in chiral nematics. Physical Review E, 2020, 101, 042702. | 2.1 | 34 |
| 31 | Review: knots and other new topological effects in liquid crystals and colloids. Reports on Progress in Physics, 2020, 83, 106601. | 20.1 | 7 5 |
| 32 | Optically enriched and guided dynamics of active skyrmions. Optics Express, 2020, 28, 6306. | 3.4 | 13 |
| 33 | Control of quantum dot emission by colloidal plasmonic pyramids in a liquid crystal. Optics Express, 2020, 28, 5459. | 3.4 | 3 |
| 34 | Plasmonic gold-cellulose nanofiber aerogels. Optics Express, 2020, 28, 34237. | 3.4 | 2 |
| 35 | Morphology of Lyotropic Myelin Figures Stained with a Fluorescent Dye. Journal of Physical Chemistry B, 2020, 124, 11974-11979. | 2.6 | 8 |
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| 38 | Schools of skyrmions with electrically tunable elastic interactions. Nature Communications, 2019, 10, 4744. | 12.8 | 37 |
| 39 | Plasmonic Metamaterial Gels with Spatially Patterned Orientational Order via 3D Printing. ACS Omega, 2019, 4, 20558-20563. | 3.5 | 17 |
| 40 | Real-space observation of skyrmion clusters with mutually orthogonal skyrmion tubes. Physical Review B, 2019, 100 , . | 3.2 | 28 |
| 41 | Electrostatically controlled surface boundary conditions in nematic liquid crystals and colloids. Science Advances, 2019, 5, eaax4257. | 10.3 | 21 |
| 42 | Three-dimensional crystals of adaptive knots. Science, 2019, 365, 1449-1453. | 12.6 | 59 |
| 43 | High-order elastic multipoles as colloidal atoms. Nature Communications, 2019, 10, 1825. | 12.8 | 18 |
| 44 | Elastic colloidal monopoles and reconfigurable self-assembly in liquid crystals. Nature, 2019, 570, 214-218. | 27.8 | 34 |
| 45 | Self-organized nonlinear gratings for ultrafast nanophotonics. Nature Photonics, 2019, 13, 494-499. | 31.4 | 60 |
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| 47 | Degenerate conic anchoring and colloidal elastic dipole-hexadecapole transformations. Nature Communications, 2019, 10, 1000. | 12.8 | 18 |
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| 52 | Light-controlled skyrmions and torons as reconfigurable particles. Optics Express, 2019, 27, 29055. | 3.4 | 24 |
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| 56 | The Effect of Thicknessâ€Tunable ZrO 2 Shell on Enhancing the Tunneling Magnetoresistance of Fe 3 O 4 Supraparticles. Advanced Materials Interfaces, 2018, 5, 1800236. | 3.7 | 8 |
| 57 | Cellulose-Based Reflective Liquid Crystal Films as Optical Filters and Solar Gain Regulators. ACS Photonics, 2018, 5, 2468-2477. | 6.6 | 63 |
| 58 | Liquid crystal self-assembly of upconversion nanorods enriched by depletion forces for mesostructured material preparation. Nanoscale, 2018, 10, 4218-4227. | 5.6 | 24 |
| 59 | Topological transformations of Hopf solitons in chiral ferromagnets and liquid crystals. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 921-926. | 7.1 | 43 |
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| 67 | Selfâ€Assembly of Cellulose Nanocrystals into Semiâ€Spherical Photonic Cholesteric Films. Advanced Functional Materials, 2018, 28, 1803852. | 14.9 | 35 |
| 68 | Electric switching of visible and infrared transmission using liquid crystals co-doped with plasmonic gold nanorods and dichroic dyes. Optics Express, 2018, 26, 22264. | 3.4 | 13 |
| 69 | Hybrid molecular-colloidal liquid crystals. Science, 2018, 360, 768-771. | 12.6 | 65 |
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| 117 | Periodic dynamics, localization metastability, and elastic interaction of colloidal particles with confining surfaces and helicoidal structure of cholesteric liquid crystals. Physical Review E, 2014, 90, 062502. | 2.1 | 8 |
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| 125 | Magnetically responsive gourd-shaped colloidal particles in cholesteric liquid crystals. Soft Matter, 2014, 10, 6014-6023. | 2.7 | 28 |
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