Tommaso G Bellini

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	End-to-End Stacking and Liquid Crystal Condensation of 6– to 20–Base Pair DNA Duplexes. Science, 2007, 318, 1276-1279.	6.0	370
2	Phase behavior of the liquid crystal 8CB in a silica aerogel. Physical Review Letters, 1992, 69, 788-791.	2.9	214
3	Universality and Scaling in the Disordering of a Smectic Liquid Crystal. Science, 2001, 294, 1074-1079.	6.0	187
4	Phase behavior and critical activated dynamics of limited-valence DNA nanostars. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 15633-15637.	3.3	156
5	Equilibrium sedimentation profiles of screened charged colloids: A test of the hard-sphere equation of state. Physical Review Letters, 1993, 71, 4267-4270.	2.9	142
6	Emerging applications of label-free optical biosensors. Nanophotonics, 2017, 6, 627-645.	2.9	140
7	Dynamic Light Scattering Study of Nematic and Smectic-ALiquid Crystal Ordering in Silica Aerogel. Physical Review Letters, 1995, 74, 2740-2743.	2.9	134
8	Nematics with Quenched Disorder: What Is Left when Long Range Order Is Disrupted?. Physical Review Letters, 2000, 85, 1008-1011.	2.9	129
9	The case of thresholdless antiferroelectricity: polarization-stabilized twisted SmC* liquid crystals give V-shaped electro-optic response. Journal of Materials Chemistry, 1999, 9, 1257-1261.	6.7	125
10	Scattering information obtained by optical microscopy: Differential dynamic microscopy and beyond. Physical Review E, 2009, 80, 031403.	0.8	121
11	Memory and topological frustration in nematic liquid crystals confined in porous materials. Nature Materials, 2011, 10, 303-309.	13.3	118
12	X-ray scattering study of smectic ordering in a silica aerogel. Physical Review Letters, 1993, 71, 3505-3508.	2.9	108
13	Heat-capacity study of nematic-isotropic and nematic–smectic-Atransitions for octylcyanobiphenyl in silica aerogels. Physical Review E, 1995, 51, 2157-2165.	0.8	98
14	Electro-optic characteristics of de Vries tilted smectic liquid crystals: Analog behavior in the smectic A* and smectic C* phases. Applied Physics Letters, 2002, 80, 4097-4099.	1.5	92
15	Static and dynamic light scattering study of fluorinated polymer colloids with a crystalline internal structure. Advances in Colloid and Interface Science, 1994, 48, 61-91.	7.0	91
16	Right-handed double-helix ultrashort DNA yields chiral nematic phases with both right- and left-handed director twist. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 17497-17502.	3.3	91
17	A fast and simple label-free immunoassay based on a smartphone. Biosensors and Bioelectronics, 2014, 58, 395-402.	5.3	86
18	Freezing Transition for Colloids with Adjustable Charge: A Test of Charge Renormalization. Physical Review Letters, 1995, 74, 4555-4558.	2.9	85

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19	DNA binding and cytotoxicity of fluorescent curcumin-based Zn(ii) complexes. MedChemComm, 2012, 3, 462.	3.5	85
20	Light-scattering measurement of the nematic correlation length in a liquid crystal with quenched disorder. Physical Review E, 1998, 57, 2996-3006.	0.8	81
21	Phase separation and liquid crystallization of complementary sequences in mixtures of nanoDNA oligomers. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 1111-1117.	3.3	80
22	Self-Assembly of Bifunctional Patchy Particles with Anisotropic Shape into Polymers Chains: Theory, Simulations, and Experiments. Macromolecules, 2012, 45, 1090-1106.	2.2	72
23	Random-field effects on the nematic–smectic-A phase transition due to silica aerosil particles. Physical Review E, 1997, 55, 2962-2968.	0.8	70
24	Liquid crystal self-assembly of random-sequence DNA oligomers. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 1110-1115.	3.3	69
25	Re-entrant DNA gels. Nature Communications, 2016, 7, 13191.	5.8	69
26	Nematics with Quenched Disorder: How Long Will It Take to Heal?. Physical Review Letters, 2002, 88, 245506.	2.9	67
27	Physical Polymerization and Liquid Crystallization of RNA Oligomers. Journal of the American Chemical Society, 2008, 130, 12864-12865.	6.6	65
28	An extended Maxwell–Wagner theory for the electric birefringence of charged colloids. Journal of Chemical Physics, 2000, 113, 6974-6983.	1.2	64
29	Nematic-Isotropic Transition in Porous Media. Physical Review Letters, 1994, 72, 4113-4116.	2.9	63
30	Stretched-exponential relaxation of electric birefringence in polymer solutions. Physical Review Letters, 1990, 64, 1043-1046.	2.9	56
31	Isotropic to Nematic Transition of Aerosil-Disordered Liquid Crystals. Physical Review Letters, 2004, 93, 127801.	2.9	56
32	Self-assembly of short DNA duplexes: from a coarse-grained model to experiments through a theoretical link. Soft Matter, 2012, 8, 8388.	1.2	56
33	Anomalous field-induced particle orientation in dilute mixtures of charged rod-like and spherical colloids. Nature Physics, 2005, 1, 103-106.	6.5	53
34	Equilibrium gels of low-valence DNA nanostars: a colloidal model for strong glass formers. Soft Matter, 2015, 11, 3132-3138.	1.2	53
35	Dielectric Dispersion of Colloidal Suspensions in the Presence of Stern Layer Conductance: Particle Size Effects. Journal of Colloid and Interface Science, 1999, 210, 194-199.	5.0	50
36	Design and Characterization of Superpotent Bivalent Ligands Targeting Oxytocin Receptor Dimers via a Channel-Like Structure. Journal of Medicinal Chemistry, 2016, 59, 7152-7166.	2.9	49

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37	Liquid Crystal Ordering and Isotropic Gelation in Solutions of Four-Base-Long DNA Oligomers. ACS Nano, 2016, 10, 8508-8516.	7.3	48
38	Determination of the size distribution of non-spherical nanoparticles by electric birefringence-based methods. Scientific Reports, 2018, 8, 9502.	1.6	47
39	A definition of internal constancy and homeostasis in the context of non-equilibrium thermodynamics. Experimental Physiology, 2004, 89, 27-38.	0.9	42
40	Liquid Crystal Alignment on a Chiral Surface: Interfacial Interaction with Sheared DNA Films. Langmuir, 2008, 24, 10390-10394.	1.6	42
41	Kinetics of Contact Formation and End-to-End Distance Distributions of Swollen Disordered Peptides. Biophysical Journal, 2009, 96, 1515-1528.	0.2	42
42	Viscoelasticity of nematic liquid crystals at a glance. Soft Matter, 2014, 10, 3938-3949.	1.2	42
43	Abiotic ligation of DNA oligomers templated by their liquid crystal ordering. Nature Communications, 2015, 6, 6424.	5.8	42
44	Backbone-free duplex-stacked monomer nucleic acids exhibiting Watson–Crick selectivity. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E7658-E7664.	3.3	42
45	Stretched-exponential relaxation of birefringence in a critical binary mixture. Physical Review B, 1988, 38, 7223-7226.	1.1	41
46	Self-Dynamics and Collective Swap-Driven Dynamics in a Particle Model for Vitrimers. Macromolecules, 2018, 51, 1232-1241.	2.2	41
47	Electric Polarizability of Polyelectrolytes: Maxwell-Wagner and Electrokinetic Relaxation. Physical Review Letters, 1999, 82, 5160-5163.	2.9	39
48	Surface alignment of ferroelectric nematic liquid crystals. Soft Matter, 2021, 17, 8130-8139.	1.2	38
49	Nematics with Quenched Disorder: Pinning out the Origin of Memory. Physical Review Letters, 2005, 94, 097802.	2.9	37
50	Hierarchical Propagation of Chirality through Reversible Polymerization: The Cholesteric Phase of DNA Oligomers. ACS Macro Letters, 2016, 5, 208-212.	2.3	37
51	Effects of finite laser coherence in quasielastic multiple scattering. Physical Review A, 1991, 44, 5215-5223.	1.0	36
52	Electric Birefringence of a Dispersion of Electrically Charged Anisotropic Particles. Europhysics Letters, 1988, 7, 561-565.	0.7	35
53	Electrokinetic properties of colloids of variable charge. I. Electrophoretic and electroâ€optic characterization. Journal of Chemical Physics, 1995, 103, 8228-8237.	1.2	35
54	Multispot, label-free biodetection at a phantom plastic–water interface. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 9350-9355.	3.3	35

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55	Nonenzymatic Polymerization into Long Linear RNA Templated by Liquid Crystal Self-Assembly. ACS Nano, 2018, 12, 9750-9762.	7.3	35
56	Liquid crystal ordering of DNA and RNA oligomers with partially overlapping sequences. Journal of Physics Condensed Matter, 2008, 20, 494214.	0.7	34
57	The emergence of memory in liquid crystals. Materials Today, 2011, 14, 488-494.	8.3	34
58	Topological defects of nematic liquid crystals confined in porous networks. Soft Matter, 2011, 7, 10945.	1.2	33
59	Electrokinetic properties of colloids of variable charge. III. Observation of a Maxwell–Wagner relaxation mechanism by high-frequency electric-birefringence spectroscopy. Journal of Chemical Physics, 2000, 113, 6984-6991.	1.2	31
60	Stretched-Exponential Relaxation of Electric Birefringence in a Polydisperse Colloidal Solution. Europhysics Letters, 1989, 10, 499-503.	0.7	30
61	DNA-Based Soft Phases. Topics in Current Chemistry, 2011, 318, 225-279.	4.0	29
62	Equilibrium gels of trivalent DNA-nanostars: Effect of the ionic strength on the dynamics. European Physical Journal E, 2015, 38, 64.	0.7	29
63	Fluctuating Elasticity Mode in Transient Molecular Networks. Physical Review Letters, 2017, 119, 078002.	2.9	29
64	Matrix analysis of electric birefringence measurements. Optics Communications, 1986, 58, 400-404.	1.0	28
65	Light scattering study of crystalline latex particles. Optics Communications, 1989, 73, 263-267.	1.0	28
66	The electrokinetic behavior of charged non-spherical colloids. Current Opinion in Colloid and Interface Science, 2010, 15, 131-144.	3.4	27
67	Fluctuation Mediated Interaction and Phase Separation of Nanoparticles in a Liquid Crystal Solvent. Physical Review Letters, 2003, 91, 085704.	2.9	26
68	Memory effects in nematics with quenched disorder. Physical Review E, 2006, 74, 011706.	0.8	26
69	Kerr effect in binary liquid mixtures. Journal of the Optical Society of America B: Optical Physics, 1986, 3, 1642.	0.9	25
70	Monte Carlo study of liquid-crystal ordering in the independent-pore model of aerogels. Physical Review E, 1996, 54, 2647-2652.	0.8	24
71	Electric Birefringence of Dispersions of Platelets. Langmuir, 2012, 28, 251-258.	1.6	24
72	Multi-spot, label-free immunoassay on reflectionless glass. Biosensors and Bioelectronics, 2015, 74, 539-545.	5.3	23

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73	Label-free detection of DNA single-base mismatches using a simple reflectance-based optical technique. Physical Chemistry Chemical Physics, 2016, 18, 13395-13402.	1.3	23
74	Phantom Nanoparticles as Probes of Biomolecular Interactions. Small, 2006, 2, 1060-1067.	5.2	22
75	Elastic anisotropy at a glance: the optical signature of disclination lines. Soft Matter, 2010, 6, 5434.	1.2	21
76	Nematic Liquid Crystals Embedded in Cubic Microlattices: Memory Effects and Bistable Pixels. Advanced Functional Materials, 2013, 23, 3990-3994.	7.8	21
77	Alignment of the columnar liquid crystal phase of nano-DNA by confinement in channels. Liquid Crystals, 2012, 39, 571-577.	0.9	20
78	Platinum-Based Drugs and DNA Interactions Studied by Single-Molecule and Bulk Measurements. Biophysical Journal, 2016, 110, 2151-2161.	0.2	20
79	Avidin Decorated Core–Shell Nanoparticles for Biorecognition Studies by Elastic Light Scattering. ChemBioChem, 2007, 8, 1021-1028.	1.3	19
80	Propagation of Chirality in Mixtures of Natural and Enantiomeric DNA Oligomers. Physical Review Letters, 2013, 110, 107801.	2.9	19
81	Evidence of Liquid Crystal–Assisted Abiotic Ligation of Nucleic Acids. Origins of Life and Evolution of Biospheres, 2015, 45, 51-68.	0.8	19
82	Electric birefringence of a binary liquid mixture near the critical consolute point. Physical Review B, 1989, 39, 7263-7265.	1.1	18
83	Pretransitional behavior of a water in liquid crystal microemulsion close to the demixing transition: Evidence for intermicellar attraction mediated by paranematic fluctuations. Journal of Chemical Physics, 2005, 122, 214721.	1.2	18
84	Stretched-exponential relaxation of electric birefringence in complex liquids. Journal of Physics Condensed Matter, 1990, 2, SA69-SA78.	0.7	17
85	Phase behavior of polarizable spherocylinders in external fields. Journal of Chemical Physics, 2004, 121, 5541-5549.	1.2	17
86	Light scattered by model phantom bacteria reveals molecular interactions at their surface. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 15866-15870.	3.3	17
87	Newtonian to non-newtonian fluid transition of a model transient network. Soft Matter, 2018, 14, 3288-3295.	1.2	17
88	Relaxation of electric birefringence near a critical consolute point. Physical Review E, 1994, 49, 3093-3096.	0.8	16
89	Electrokinetic properties of colloids of variable charge. II. Electric birefringence versus dielectric properties. Journal of Chemical Physics, 1998, 109, 6905-6910.	1.2	15
90	First-Order Transitions and Hexatic Ordering in the Aerogel-Confined Liquid Crystal 650BC. Physical Review Letters, 1996, 77, 2507-2510.	2.9	14

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91	Forward depolarized light scattering: heterodyne versus homodyne detection. Physica A: Statistical Mechanics and Its Applications, 1997, 235, 279-290.	1.2	14
92	SARS-CoV-2 infection among asymptomatic homebound subjects in Milan, Italy. European Journal of Internal Medicine, 2020, 78, 161-163.	1.0	14
93	Effect of ionic mobility on the enhanced dielectric and electro-optic susceptibility of suspensions: Theory and experiments. Journal of Chemical Physics, 2002, 116, 10973-10980.	1.2	13
94	A label-free immunoassay for Flavivirus detection by the Reflective Phantom Interface technology. Biochemical and Biophysical Research Communications, 2017, 492, 558-564.	1.0	13
95	lsotropic to smectic A phase transitions in a porous matrix: a case of multiporous phase coexistence. Journal of Physics Condensed Matter, 2003, 15, S175-S182.	0.7	12
96	Phases and structures of sunset yellow and disodium cromoglycate mixtures in water. Physical Review E, 2016, 93, 012704.	0.8	12
97	Phase separations, liquid crystal ordering and molecular partitioning in mixtures of PEG and DNA oligomers. Liquid Crystals, 2018, 45, 2306-2318.	0.9	12
98	Elasticity and Viscosity of DNA Liquid Crystals. ACS Macro Letters, 2020, 9, 1034-1039.	2.3	12
99	Integrated Optofluidic Chip for Oscillatory Microrheology. Scientific Reports, 2020, 10, 5831.	1.6	12
100	Measurements of the Persistence Length of Flexible Polyelectrolytes. International Journal of Polymer Analysis and Characterization, 1995, 2, 83-93.	0.9	11
101	Frequency dependence of the dielectric and electro-optic response in suspensions of charged rod-like colloidal particles. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1998, 140, 157-167.	2.3	11
102	Liquid Crystal Ordering of Four-Base-Long DNA Oligomers with Both G–C and A–T Pairing. Crystals, 2018, 8, 5.	1.0	11
103	Lattice Spin Models of Liquid Crystals in Aerogels. Molecular Crystals and Liquid Crystals, 1996, 290, 227-236.	0.3	10
104	Non-linear dynamics of the electro-optic response of confined liquid crystals. Europhysics Letters, 1999, 48, 634-640.	0.7	10
105	Non-linear optical measurement of the twist elastic constant in thermotropic and DNA lyotropic chiral nematics. Scientific Reports, 2017, 7, 4959.	1.6	10
106	Neutral and niche forces as drivers of species selection. Journal of Theoretical Biology, 2019, 483, 109969.	0.8	10
107	Quadruplex knots as network nodes: nano-partitioning of guanosine derivates in supramolecular hydrogels. Soft Matter, 2019, 15, 2315-2318.	1.2	10
108	Gelling without Structuring: A SAXS Study of the Interactions among DNA Nanostars. Langmuir, 2020, 36, 10387-10396.	1.6	10

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109	Integrated Optofluidic Chip for Low-Volume Fluid Viscosity Measurement. Micromachines, 2017, 8, 65.	1.4	9
110	The electric birefringence of polyelectrolytes: an electrokinetic approach. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1998, 140, 103-117.	2.3	8
111	Electrokinetics in extremely bimodal suspensions. Journal of Colloid and Interface Science, 2007, 309, 296-302.	5.0	8
112	Selective Adsorption on Fluorinated Plastic Enables the Optical Detection of Molecular Pollutants in Water. Physical Review Applied, 2016, 5, .	1.5	8
113	Interferometric study of selectively excited bubble capillary modes. Europhysics Letters, 1997, 38, 521-526.	0.7	7
114	Towards a Universal Method for the Stable and Clean Functionalization of Inert Perfluoropolymer Nanoparticles: Exploiting Photopolymerizable Amphiphilic Diacetylenes. Advanced Functional Materials, 2010, 20, 3932-3940.	7.8	7
115	Monte Carlo Metropolis simulation of interacting anisotropic polarizable spins on a lattice. Computer Physics Communications, 2001, 134, 47-57.	3.0	6
116	Field-induced anti-nematic ordering in assemblies of anisotropically polarizable particles. Europhysics Letters, 2001, 55, 362-368.	0.7	6
117	Giant optical nonlinearity in DNA lyotropic liquid crystals. Optics Express, 2017, 25, 25951.	1.7	6
118	Guided propagation in electric-field-controlled hybrid nematic waveguides. Journal of Applied Physics, 2004, 95, 5972-5978.	1.1	5
119	Coil-to-Globule Transition of Poly(N-isopropylacrylamide) Doped with Chiral Amino Acidic Comonomers. Journal of Physical Chemistry B, 2007, 111, 2372-2376.	1.2	5
120	Field-induced clearing in sphere-sphere and rod-sphere binary mixtures of charged colloidal particles. Physical Review E, 2009, 79, 060401.	0.8	5
121	A Bit Stickier, a Bit Slower, a Lot Stiffer: Specific vs. Nonspecific Binding of Gal4 to DNA. International Journal of Molecular Sciences, 2021, 22, 3813.	1.8	5
122	Statistical physics of DNA hybridization. Physical Review E, 2021, 103, 042503.	0.8	5
123	<i>VID22</i> counteracts G-quadruplex-induced genome instability. Nucleic Acids Research, 2021, 49, 12785-12804.	6.5	5
124	An optical interferometer for gas bubble measurements. Review of Scientific Instruments, 1996, 67, 3564-3566.	0.6	4
125	Field-controlled optical profile of a waveguide having a liquid-crystalline core. Applied Physics Letters, 2002, 81, 2337-2339.	1.5	4
126	Optical and electro-optical derivation of the pretransitional behavior of orientational and shear viscosities in the isotropic phase of liquid crystals. Physical Review E, 2006, 74, 011707.	0.8	4

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127	Dispersed Phantom Scatterer Technique Reveals Subtle Differences in Substrate Recognition by Phospholipase D Inactive Mutants. ChemBioChem, 2009, 10, 639-644.	1.3	4
128	Yield stress "in a flash― investigation of nonlinearity and yielding in soft materials with an optofluidic microrheometer. Soft Matter, 2021, 17, 3105-3112.	1.2	4
129	Electric birefringence study of the dielectric properties of anisotropic and electrically charged latex particles. European Physical Journal Special Topics, 1993, 03, C1-129-C1-142.	0.2	4
130	The electric birefringence of polyelectrolytes. Maxwell–Wagner and electrokinetic relaxation. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2001, 183-185, 183-190.	2.3	3
131	Fabrication and Optical Modeling of Microâ€Porous Membranes Indexâ€Matched with Water for Onâ€Line Sensing Applications. Macromolecular Materials and Engineering, 2020, 305, 1900701.	1.7	3
132	Optical force-based detection of splay and twist viscoelasticity of CCN47 across the Nematic-to-Smectic A transition. Journal of Molecular Liquids, 2021, 329, 115520.	2.3	3
133	Pairing statistics and melting of random DNA oligomers: Finding your partner in superdiverse environments. PLoS Computational Biology, 2022, 18, e1010051.	1.5	3
134	Liquid Crystal Ordering in DNA Double Helices with Backbone Discontinuities. Macromolecules, 2022, 55, 5946-5953.	2.2	3
135	Dynamic Depolarised Light Scattering Studies of Anisotropic Brownian Particles. , 1997, , 7-21.		2
136	A laser interferometer for the study of electrically excited bubble capillary modes. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2001, 183-185, 85-93.	2.3	1
137	Conformations and Dynamics of Polypeptide Chains Revealed By Tryptophan-Cysteine Contact Formation Kinetics. Biophysical Journal, 2010, 98, 30a.	0.2	1
138	Effect of configuration of the microchannels fabricated by femtosecond laser micromachining on topological defects in confined liquid crystals. Proceedings of SPIE, 2012, , .	0.8	1
139	Depolarized forward light scattering from anisotropic particles. Progress in Colloid and Polymer Science, 1997, 104, 17-22.	0.5	1
140	Needles in Haystacks: Understanding the Success of Selective Pairing of Nucleic Acids. International Journal of Molecular Sciences, 2022, 23, 3072.	1.8	1
141	OxDNA to Study Species Interactions. Entropy, 2022, 24, 458.	1.1	1
142	Depolarized light scattering study of equilibrium sedimentation profiles of colloidal dispersions. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1994, 16, 1091-1101.	0.4	0
143	Dielectric behavior of a thermotropic liquid crystal incorporated in a porous glass. , 1996, , .		0
144	Computer Simulations of Nematic Ordering with Random Disorder. Molecular Crystals and Liquid Crystals, 2000, 352, 217-224.	0.3	0

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145	Dynamic control of the optical properties of a liquid crystal waveguide by means of an applied electric field. , 2003, , .		0
146	Reshaping of the refractive index profile of a liquid crystal waveguide by means of an external electric field. , 2003, , .		0
147	Folding Kinetics of Small Proteins Revealed by Tryptophan-Cysteine Contact Formation Experiments. Biophysical Journal, 2011, 100, 210a.	0.2	0
148	Detection of biomolecules using light scattering. , 2011, , .		0
149	Bistability of nematic liquid crystals confined in 3D scaffold produced by two-photon polymerization. , 2012, , .		0
150	Characterisation of a DNA hydrogel viscosity by an integrated optofluidic microrheometer. , 2019, , .		0
151	Equilibrium Sedimentation Profiles of Screened Charged Colloids. A Test of the Hard-Sphere Equation of State. , 1995, , 595-608.		0
152	Portable, Multispot, Label-Free Immunoassay on a Phantom Perfluorinated Plastic. Lecture Notes in Electrical Engineering, 2015, , 13-17.	0.3	0
153	Design and Optimization of a Rapid, Multiplex miRNA Assay without Washing Steps. , 2020, 60, .		0