

Shirsendu Mitra

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.

90
papers

1,277
citations

20
h-index

31
g-index

99
ext. papers

1,506
ext. citations

5.1
avg. IF

4.93
L-index

#	Paper	IF	Citations
90	Carbon dots and Methylene blue Facilitated photometric quantification of Hemoglobin.. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2022 , 271, 120906	4.4	1
89	Pathways to community transmission of COVID-19 due to rapid evaporation of respiratory virulets.. <i>Journal of Colloid and Interface Science</i> , 2022 , 619, 229-245	9.3	2
88	Pathologic evidence of retinoblastoma seeds supported by field emission scanning electron microscopy and Raman spectroscopy. <i>Indian Journal of Ophthalmology</i> , 2021 , 69, 3612-3617	1.6	
87	Self-organization of random copolymers to nanopatterns by localized e-beam dosing. <i>Nanotechnology</i> , 2021 , 32,	3.4	1
86	Noninvasive Point-of-Care Nanobiosensing of Cervical Cancer as an Auxiliary to Pap-Smear Test.. <i>ACS Applied Bio Materials</i> , 2021 , 4, 5378-5390	4.1	2
85	Multicomponent counter mass transfer in liquid-liquid extraction in presence of spontaneous interfacial convection. <i>Materials Today: Proceedings</i> , 2021 , 46, 6304-6311	1.4	0
84	A coupled continuum-statistical model to predict interfacial deformation under an external field. <i>Journal of Colloid and Interface Science</i> , 2021 , 587, 864-875	9.3	4
83	Proton exchange membrane and bio-Fenton micro fuel cells for energy harvesting, gas leakage detection, and dye degradation.. <i>RSC Advances</i> , 2021 , 11, 12720-12728	3.7	0
82	Electric-Discharge-Mediated Jetting, Crowning, Bursting, and Atomization of a Droplet. <i>Physical Review Applied</i> , 2021 , 15,	4.3	1
81	Physicochemical defect guided dewetting of ultrathin films to fabricate nanoscale patterns. <i>Nanotechnology</i> , 2021 , 32, 195303	3.4	1
80	A microfluidic viscometer: Translation of oscillatory motion of a water microdroplet in oil under electric field. <i>Electrophoresis</i> , 2021 , 42, 2162-2170	3.6	
79	Functional liquid droplets for analyte sensing and energy harvesting. <i>Advances in Colloid and Interface Science</i> , 2021 , 294, 102453	14.3	1
78	Non-Enzymatic Urea Sensing Based on MWCNT Nanocomposite. <i>IEEE Sensors Journal</i> , 2021 , 21, 18417-18424	4.4	1
77	Multifunctional liquid marbles to stabilize and transport reactive fluids. <i>Soft Matter</i> , 2021 , 17, 5084-5095	3.6	5
76	Self-organized spreading of droplets to fluid toroids. <i>Journal of Colloid and Interface Science</i> , 2020 , 578, 738-748	9.3	2
75	Microfluidic Immunosensor for Point-of-Care-Testing of Beta-2-Microglobulin in Tear. <i>ACS Sustainable Chemistry and Engineering</i> , 2020 , 8, 9268-9276	8.3	4
74	Microdroplet based disposable sensor patch for detection of Amylase in human blood serum. <i>Biosensors and Bioelectronics</i> , 2020 , 165, 112333	11.8	14

73	Magnetically Actuated Carbon Soot Nanoparticle-Based Catalytic CARBOts Coated with Ni/Pt Nanofilms for Water Detoxification and Oil-Spill Recovery. <i>ACS Applied Nano Materials</i> , 2020 , 3, 3459-3470	5.6	7
72	Microdroplet photofuel cells to harvest high-density energy and dye degradation. <i>Nanoscale Advances</i> , 2020 , 2, 1613-1624	5.1	4
71	Pattern-Directed Phase Transitions and VOC Sensing of Liquid Crystal Films. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 1902-1913	3.9	1
70	Multimodal chemo-/magneto-/phototaxis of 3G CNT-bots to power fuel cells. <i>Microsystems and Nanoengineering</i> , 2020 , 6, 19	7.7	4
69	Paper-Based Sensors for Point-of-Care Kidney Function Monitoring. <i>IEEE Sensors Journal</i> , 2020 , 20, 9644-9651	4.6	4
68	A computational study on osmotic chemotaxis of a reactive Janusbot. <i>Physics of Fluids</i> , 2020 , 32, 112018	4.4	3
67	Paper Based Enzymatic Chemiresistor for POC Detection of Ethanol in Human Breath. <i>IEEE Sensors Journal</i> , 2020 , 20, 2278-2286	4	14
66	Efficient microextraction process exploiting spontaneous interfacial convection driven by Marangoni and electric field induced instability: A computational fluid dynamics study. <i>Physics of Fluids</i> , 2020 , 32, 014102	4.4	5
65	Dipolar Alignment in a Ferroelectric Dielectric Layer of FeFETs to Boost Charge Mobility and Nonvolatile Memory. <i>ACS Applied Electronic Materials</i> , 2020 , 2, 3187-3198	4	3
64	Electroosmosis with Augmented Mixing in Rigid to Flexible Microchannels with Surface Patterns. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 3717-3729	3.9	4
63	Graphene oxide nanohybrids for electron transfer-mediated antimicrobial activity. <i>Nanoscale Advances</i> , 2019 , 1, 3727-3740	5.1	6
62	Electric field mediated squeezing to bending transitions of interfacial instabilities for digitization and mixing of two-phase microflows. <i>Physics of Fluids</i> , 2019 , 31, 052005	4.4	9
61	Acoustic Wave Catalyzed Urea Detection Utilizing a Pulsatile Microdroplet Sensor. <i>ACS Sustainable Chemistry and Engineering</i> , 2019 ,	8.3	2
60	Paper-Sensors for Point-of-Care Monitoring of Drinking Water Quality. <i>IEEE Sensors Journal</i> , 2019 , 19, 7936-7941	4	13
59	Effects of Fluid-Structure Interaction and Surface Heterogeneity on the Electrophoresis of Microparticles. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 6756-6766	3.9	6
58	Electrodynamic-contact-line-lithography with nematic liquid crystals for template-less E-writing of mesopatterns on soft surfaces. <i>Nanoscale</i> , 2019 , 11, 16523-16533	7.7	6
57	Electric field mediated von Kármán vortices in stratified microflows: transition from linear instabilities to coherent mixing. <i>Journal of Fluid Mechanics</i> , 2019 , 865, 169-211	3.7	8
56	Point-of-care stress detection of muscles using a flexible surface potential measurement prototype. <i>Medical Devices & Sensors</i> , 2019 , 2, e10054	1.6	0

55	Unexplored Pathways To Charge Storage in Supercapacitors. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 195-204	3.8	9
54	Point-of-care-testing of α -amylase activity in human blood serum. <i>Biosensors and Bioelectronics</i> , 2019 , 124-125, 75-81	11.8	20
53	Joint mass transfer of two components associated with the spontaneous interfacial convection in the liquid-liquid extraction system. <i>Chemical Engineering Science</i> , 2019 , 195, 301-311	4.4	7
52	Electric field assisted multicomponent reaction in a microfluidic reactor for superior conversion and yield. <i>Electrophoresis</i> , 2019 , 40, 401-409	3.6	
51	Formic acid powered reusable autonomous ferrobots for efficient hydrogen generation under ambient conditions. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 9209-9219	13	7
50	Dynamics of deformation and pinch-off of a migrating compound droplet in a tube. <i>Physical Review E</i> , 2018 , 97, 043112	2.4	25
49	Electric-field-mediated instability modes and Fréedericksz transition of thin nematic films. <i>Journal of Fluid Mechanics</i> , 2018 , 834, 464-509	3.7	5
48	Micro-patterning of coatings on a fiber surface exploiting the contact instabilities of thin viscoelastic films. <i>Physics of Fluids</i> , 2018 , 30, 114101	4.4	6
47	Dynamics of drop formation from submerged orifices under the influence of electric field. <i>Physics of Fluids</i> , 2018 , 30, 122104	4.4	15
46	Self-Organized Large-Scale Integration of Mesoscale-Ordered Heterojunctions for Process-Intensified Photovoltaics. <i>Physical Review Applied</i> , 2018 , 10,	4.3	7
45	Steady and Oscillatory Lorentz-Force-Induced Transport and Digitization of Two-Phase Microflows. <i>Physical Review Applied</i> , 2018 , 10,	4.3	8
44	Nano-enabled paper humidity sensor for mobile based point-of-care lung function monitoring. <i>Biosensors and Bioelectronics</i> , 2017 , 94, 544-551	11.8	60
43	Magnetic Field Guided Chemotaxis of iMushbots for Targeted Anticancer Therapeutics. <i>ACS Biomaterials Science and Engineering</i> , 2017 , 3, 1627-1640	5.5	35
42	Pattern-Directed Ordering of Spin-Dewetted Liquid Crystal Micro- or Nanodroplets as Pixelated Light Reflectors and Locomotives. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 1066-1076	9.5	10
41	Field induced anomalous spreading, oscillation, ejection, spinning, and breaking of oil droplets on a strongly slipping water surface. <i>Faraday Discussions</i> , 2017 , 199, 115-128	3.6	10
40	Formation of liquid drops at an orifice and dynamics of pinch-off in liquid jets. <i>Physical Review E</i> , 2017 , 96, 013115	2.4	20
39	Giant Slip Induced Anomalous Dewetting of an Ultrathin Film on a Viscous Sublayer. <i>Scientific Reports</i> , 2017 , 7, 14776	4.9	2
38	Electric field mediated spraying of miniaturized droplets inside microchannel. <i>Electrophoresis</i> , 2017 , 38, 1450-1457	3.6	25

37	Discrete electric field mediated droplet splitting in microchannels: Fission, Cascade, and Rayleigh modes. <i>Electrophoresis</i> , 2017 , 38, 278-286	3.6	19
36	Microfluidic Electrolyzers for Production and Separation of Hydrogen from Sea Water using Naturally Abundant Solar Energy. <i>Energy Technology</i> , 2017 , 5, 1208-1217	3.5	4
35	Hierarchical micro- and nanofabrication by pattern-directed contact instabilities of thin viscoelastic films. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	6
34	Magnetic field induced pushpull motility of liquibots. <i>RSC Advances</i> , 2016 , 6, 107049-107056	3.7	7
33	Self-spinning nanoparticle laden microdroplets for sensing and energy harvesting. <i>Nanoscale</i> , 2016 , 8, 6118-28	7.7	29
32	Paper-based Amylase detector for point-of-care diagnostics. <i>Biosensors and Bioelectronics</i> , 2016 , 78, 447-453	11.8	47
31	Pathways from disordered to ordered nanostructures from defect guided dewetting of ultrathin bilayers. <i>Journal of Colloid and Interface Science</i> , 2016 , 465, 128-39	9.3	3
30	Influence of the mutable kinetic parameters on the adhesion and debonding of thin viscoelastic films. <i>Journal of Colloid and Interface Science</i> , 2016 , 477, 109-22	9.3	9
29	Graphene based multifunctional superbots. <i>Carbon</i> , 2015 , 89, 31-40	10.4	41
28	Digitization of two-phase flow patterns in a microchannel induced by an external AC field. <i>RSC Advances</i> , 2015 , 5, 29545-29551	3.7	15
27	Capillary force mediated flow patterns and non-monotonic pressure drop characteristics of oil-water microflows. <i>Canadian Journal of Chemical Engineering</i> , 2015 , 93, 1736-1743	2.3	17
26	Localized electric field induced transition and miniaturization of two-phase flow patterns inside microchannels. <i>Electrophoresis</i> , 2014 , 35, 2930-7	3.6	14
25	Charge Leakage Mediated Pattern Miniaturization in the Electric Field Induced Instabilities of an Elastic Membrane. <i>Industrial & Engineering Chemistry Research</i> , 2014 , 53, 18840-18851	3.9	2
24	Multimodal chemo-magnetic control of self-propelling microbots. <i>Nanoscale</i> , 2014 , 6, 1398-405	7.7	43
23	Electro-capillary instabilities of thin leaky elastic-viscous bilayers. <i>Physics of Fluids</i> , 2014 , 26, 122006	4.4	4
22	Long-wave interfacial instabilities in a thin electrolyte film undergoing coupled electrokinetic flows: a nonlinear analysis. <i>Microfluidics and Nanofluidics</i> , 2013 , 15, 19-33	2.8	10
21	The pH taxis of an intelligent catalytic microbot. <i>Small</i> , 2013 , 9, 1916-20	11	81
20	Instabilities of a free bilayer flowing on an inclined porous medium. <i>Physical Review E</i> , 2013 , 88, 063012	2.4	

19	Electro-magnetic-field-induced flow and interfacial instabilities in confined stratified liquid layers. <i>Theoretical and Computational Fluid Dynamics</i> , 2012 , 26, 23-28	2.3	15
18	Instabilities in free-surface electroosmotic flows. <i>Theoretical and Computational Fluid Dynamics</i> , 2012 , 26, 311-318	2.3	19
17	From finite-amplitude equilibrium structures to dewetting in thin polymer films on chemically patterned substrates. <i>Soft Matter</i> , 2012 , 8, 10394	3.6	15
16	Electric-Field-Induced Instabilities in Thin Liquid Trilayers Confined between Patterned Electrodes. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 22847-22858	3.8	15
15	Electric field and van der Waals force induced instabilities in thin viscoelastic bilayers. <i>Physics of Fluids</i> , 2012 , 24, 074106	4.4	13
14	The flow of magnetic nanoparticles in magnetic drug targeting. <i>RSC Advances</i> , 2011 , 1, 238	3.7	34
13	Multiscale Pattern Generation in Viscoelastic Polymer Films by Spatiotemporal Modulation of Electric Field and Control of Rheology. <i>Advanced Functional Materials</i> , 2011 , 21, 324-335	15.6	33
12	Surface instability of a thin electrolyte film undergoing coupled electroosmotic and electrophoretic flows in a microfluidic channel. <i>Electrophoresis</i> , 2011 , 32, 3257-67	3.6	24
11	Switching of interfacial instabilities from the liquid/air interface to the liquid/liquid interface in a polymer bilayer. <i>Soft Matter</i> , 2011 , 7, 8056	3.6	12
10	Self-Organized Ordered Arrays of CoreShell Columns in Viscous Bilayers Formed by Spatially Varying Electric Fields. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 21020-21028	3.8	29
9	Self-Organized Micropatterning of Thin Viscous Bilayers Under Microgravity. <i>Microgravity Science and Technology</i> , 2010 , 22, 273-282	1.6	4
8	Electric-field-induced interfacial instabilities and morphologies of thin viscous and elastic bilayers. <i>Langmuir</i> , 2009 , 25, 9108-18	4	51
7	Dewetting of the thin liquid bilayers on topographically patterned substrates: formation of microchannel and microdot arrays. <i>Langmuir</i> , 2008 , 24, 14048-58	4	34
6	Dewetting pathways and morphology of unstable thin liquid bilayers. <i>Journal of Physical Chemistry B</i> , 2008 , 112, 11564-72	3.4	29
5	Instabilities and pattern miniaturization in confined and free elastic-viscous bilayers. <i>Journal of Chemical Physics</i> , 2008 , 128, 154909	3.9	22
4	Two Coexisting Modes in Field-Assisted AFM Nanopatterning of Thin Polymer Films. <i>Macromolecular Chemistry and Physics</i> , 2008 , 209, 1358-1366	2.6	2
3	Electric field induced instabilities in thin confined bilayers. <i>Journal of Colloid and Interface Science</i> , 2007 , 311, 595-608	9.3	30
2	Nonlinear instabilities and pathways of rupture in thin liquid bilayers. <i>Journal of Chemical Physics</i> , 2006 , 125, 054711	3.9	42

- 1 Instability and Dynamics of Thin Liquid Bilayers. *Industrial & Engineering Chemistry Research*, **2005**, 44, 1259-1272 3.9 88