

Dipankar Bandyopadhyay

List of Publications by Citations

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98
papers

1,479
citations

21
h-index

34
g-index

107
ext. papers

1,714
ext. citations

5.2
avg. IF

5.16
L-index

#	Paper	IF	Citations
98	Control of morphology in pattern directed dewetting of thin polymer films. <i>Soft Matter</i> , 2008 , 4, 2086	3.6	108
97	Instability and Dynamics of Thin Liquid Bilayers. <i>Industrial & Engineering Chemistry Research</i> , 2005 , 44, 1259-1272	3.9	88
96	The pH taxis of an intelligent catalytic microbot. <i>Small</i> , 2013 , 9, 1916-20	11	81
95	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
94	Electric-field-induced interfacial instabilities and morphologies of thin viscous and elastic bilayers. <i>Langmuir</i> , 2009 , 25, 9108-18	4	51
93	Paper-based α -amylase detector for point-of-care diagnostics. <i>Biosensors and Bioelectronics</i> , 2016 , 78, 447-453	11.8	47
92	Multimodal chemo-magnetic control of self-propelling microbots. <i>Nanoscale</i> , 2014 , 6, 1398-405	7.7	43
91	Nonlinear instabilities and pathways of rupture in thin liquid bilayers. <i>Journal of Chemical Physics</i> , 2006 , 125, 054711	3.9	42
90	Graphene based multifunctional superbots. <i>Carbon</i> , 2015 , 89, 31-40	10.4	41
89	Magnetic Field Guided Chemotaxis of iMushbots for Targeted Anticancer Therapeutics. <i>ACS Biomaterials Science and Engineering</i> , 2017 , 3, 1627-1640	5.5	35
88	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
87	Self-Organized Microstructures in Thin Bilayers on Chemically Patterned Substrates. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 2237-2247	3.8	31
86	Self-spinning nanoparticle laden microdroplets for sensing and energy harvesting. <i>Nanoscale</i> , 2016 , 8, 6118-28	7.7	29
85	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
84	Dewetting pathways and morphology of unstable thin liquid bilayers. <i>Journal of Physical Chemistry B</i> , 2008 , 112, 11564-72	3.4	29
83	Parametric study on instabilities in a two-layer electromagnetohydrodynamic channel flow confined between two parallel electrodes. <i>Physical Review E</i> , 2011 , 83, 036313	2.4	26
82	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

81	Electric field mediated spraying of miniaturized droplets inside microchannel. <i>Electrophoresis</i> , 2017 , 38, 1450-1457	3.6	25
80	Electric field induced microstructures in thin films on physicochemically heterogeneous and patterned substrates. <i>Journal of Chemical Physics</i> , 2010 , 132, 174703	3.9	25
79	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
78	Mechanisms of humidity sensing on a CdS nanoparticle coated paper sensor. <i>Sensors and Actuators A: Physical</i> , 2019 , 285, 241-247	3.9	24
77	Magnetically guided chemical locomotion of self-propelling paperbots. <i>RSC Advances</i> , 2015 , 5, 64444-64449	3.7	21
76	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
75	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
74	Discrete electric field mediated droplet splitting in microchannels: Fission, Cascade, and Rayleigh modes. <i>Electrophoresis</i> , 2017 , 38, 278-286	3.6	19
73	Solvent vapour mediated spontaneous healing of self-organized defects of liquid crystal films. <i>Soft Matter</i> , 2015 , 11, 139-46	3.6	17
72	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
71	Electric field induced instabilities of thin leaky bilayers: pathways to unique morphologies and miniaturization. <i>Journal of Chemical Physics</i> , 2013 , 138, 024705	3.9	16
70	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
69	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
68	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
67	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
66	Dynamics of drop formation from submerged orifices under the influence of electric field. <i>Physics of Fluids</i> , 2018 , 30, 122104	4.4	15
65	Microdroplet based disposable sensor patch for detection of α -amylase in human blood serum. <i>Biosensors and Bioelectronics</i> , 2020 , 165, 112333	11.8	14
64	Localized electric field induced transition and miniaturization of two-phase flow patterns inside microchannels. <i>Electrophoresis</i> , 2014 , 35, 2930-7	3.6	14

63	Embedded microstructures by electric-field-induced pattern formation in interacting thin layers. <i>Langmuir</i> , 2010 , 26, 10943-52	4	14
62	Electric-field and contact-force-induced tunable patterns in slipping soft elastic films. <i>Europhysics Letters</i> , 2010 , 89, 36002	1.6	14
61	Paper Based Enzymatic Chemiresistor for POC Detection of Ethanol in Human Breath. <i>IEEE Sensors Journal</i> , 2020 , 20, 2278-2286	4	14
60	Paper-Sensors for Point-of-Care Monitoring of Drinking Water Quality. <i>IEEE Sensors Journal</i> , 2019 , 19, 7936-7941	4	13
59	Electric field and van der Waals force induced instabilities in thin viscoelastic bilayers. <i>Physics of Fluids</i> , 2012 , 24, 074106	4.4	13
58	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
57	Instability and dewetting of ultrathin solid viscoelastic films on homogeneous and heterogeneous substrates. <i>Journal of Chemical Physics</i> , 2011 , 134, 064705	3.9	12
56	Magnetotactic T-Budbots to Kill-n-Clean Biofilms. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 43353-43364	3.4	11
55	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
54	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
53	Flexible Paper Touchpad for Parkinson's Hand Tremor Detection. <i>Sensors and Actuators A: Physical</i> , 2019 , 294, 164-172	3.9	10
52	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
51	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
50	Unexplored Pathways To Charge Storage in Supercapacitors. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 195-204	3.8	9
49	Electric Field Induced Patterning of Thin Coatings on Fiber Surfaces. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 6215-6221	3.8	8
48	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
47	Reusable nano-BG-FET for point-of-care estimation of ammonia and urea in human urine. <i>Nanotechnology</i> , 2019 , 30, 145502	3.4	8
46	Steady and Oscillatory Lorentz-Force-Induced Transport and Digitization of Two-Phase Microflows. <i>Physical Review Applied</i> , 2018 , 10,	4.3	8

45	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
44	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
43	Magnetic field induced pushpull motility of liquibots. <i>RSC Advances</i> , 2016 , 6, 107049-107056	3.7	7
42	Self-Organized Large-Scale Integration of Mesoscale-Ordered Heterojunctions for Process-Intensified Photovoltaics. <i>Physical Review Applied</i> , 2018 , 10,	4.3	7
41	Graphene oxide nanohybrids for electron transfer-mediated antimicrobial activity. <i>Nanoscale Advances</i> , 2019 , 1, 3727-3740	5.1	6
40	Effects of FluidStructureInteraction and Surface Heterogeneity on the Electrophoresis of Microparticles. <i>Industrial & Engineering Chemistry Research</i> , 2019 , 58, 6756-6766	3.9	6
39	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
38	Hierarchical micro- and nanofabrication by pattern-directed contact instabilities of thin viscoelastic films. <i>Physical Review Fluids</i> , 2017 , 2,	2.8	6
37	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
36	RGO-Paper Sensor for Point-of-Care Detection of Lipase in Blood Serum 2018 , 2, 1-4		6
35	Boolean-chemotaxis of logibots deciphering the motions of self-propelling microorganisms. <i>Soft Matter</i> , 2018 , 14, 3182-3191	3.6	5
34	Electric-field-mediated instability modes and Frödericksz transition of thin nematic films. <i>Journal of Fluid Mechanics</i> , 2018 , 834, 464-509	3.7	5
33	Multifunctional liquid marbles to stabilize and transport reactive fluids. <i>Soft Matter</i> , 2021 , 17, 5084-5095	5.6	5
32	Acoustic Propulsion of Vitamin C Loaded Teabots for Targeted Oxidative Stress and Amyloid Therapeutics.. <i>ACS Applied Bio Materials</i> , 2019 , 2, 4571-4582	4.1	4
31	Microfluidic Schottky-junction photovoltaics with superior efficiency stimulated by plasmonic nanoparticles and streaming potential. <i>Nanoscale Advances</i> , 2019 , 1, 1155-1164	5.1	4
30	Fabrication of pixelated liquid crystal nanostructures employing the contact line instabilities of droplets. <i>Nanoscale</i> , 2019 , 11, 1680-1691	7.7	4
29	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
28	Microdroplet photofuel cells to harvest high-density energy and dye degradation. <i>Nanoscale Advances</i> , 2020 , 2, 1613-1624	5.1	4

27	Multimodal chemo-/magneto-/phototaxis of 3G CNT-bots to power fuel cells. <i>Microsystems and Nanoengineering</i> , 2020 , 6, 19	7.7	4
26	Paper-Based Sensors for Point-of-Care Kidney Function Monitoring. <i>IEEE Sensors Journal</i> , 2020 , 20, 9644-9651	4.6	4
25	Electric field mediated separation of water-ethanol mixtures in carbon-nanotubes integrated in nanoporous graphene membranes. <i>Faraday Discussions</i> , 2018 , 209, 259-271	3.6	4
24	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
23	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
22	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
21	UV-Ozone mediated miniaturization of dewetted polymeric nanostructures on graphene-oxide-flakes for enhanced Raman scattering. <i>Carbon</i> , 2017 , 121, 612-624	10.4	3
20	Electric field mediated elastic contact lithography of thin viscoelastic films for miniaturized and multiscale patterns. <i>Soft Matter</i> , 2018 , 14, 3963-3977	3.6	3
19	A computational study on osmotic chemotaxis of a reactive Janusbot. <i>Physics of Fluids</i> , 2020 , 32, 112018	4.4	3
18	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
17	Acoustic Wave Catalyzed Urea Detection Utilizing a Pulsatile Microdroplet Sensor. <i>ACS Sustainable Chemistry and Engineering</i> , 2019 ,	8.3	2
16	Self-organized spreading of droplets to fluid toroids. <i>Journal of Colloid and Interface Science</i> , 2020 , 578, 738-748	9.3	2
15	Giant Slip Induced Anomalous Dewetting of an Ultrathin Film on a Viscous Sublayer. <i>Scientific Reports</i> , 2017 , 7, 14776	4.9	2
14	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
13	Magnetotactic curcumin iButtonbots as efficient bactericidal agents. <i>Bulletin of Materials Science</i> , 2020 , 43, 1	1.7	2
12	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
11	Pattern-Directed Phase Transitions and VOC Sensing of Liquid Crystal Films. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 1902-1913	3.9	1
10	Self-organization of random copolymers to nanopatterns by localized e-beam dosing. <i>Nanotechnology</i> , 2021 , 32,	3.4	1

9	Conductive Polymer Nanobiosensors. <i>Environmental Chemistry for A Sustainable World</i> , 2021 , 85-118	0.8	1
8	Electric-Discharge-Mediated Jetting, Crowning, Bursting, and Atomization of a Droplet. <i>Physical Review Applied</i> , 2021 , 15,	4.3	1
7	Physicochemical defect guided dewetting of ultrathin films to fabricate nanoscale patterns. <i>Nanotechnology</i> , 2021 , 32, 195303	3.4	1
6	Functional liquid droplets for analyte sensing and energy harvesting. <i>Advances in Colloid and Interface Science</i> , 2021 , 294, 102453	14.3	1
5	Graphite/RGO coated paper Electrolyzers for production and separation of hydrogen and oxygen. <i>Energy</i> , 2021 , 228, 120490	7.9	1
4	Multifunctional gold nanoparticles for biosensing: effects of surface plasmon resonance, localized surface plasmon resonance, fluorescence, and aggregation 2021 , 331-366		0
3	Self-Organized Implanting of Micro/Nanofiltration Membranes in Advanced Flow Reactors. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 19430-19442	9.5	
2	Electric field assisted multicomponent reaction in a microfluidic reactor for superior conversion and yield. <i>Electrophoresis</i> , 2019 , 40, 401-409	3.6	
1	Advances in Materials, Methods, and Principles of Modern Biosensing Tools 2022 , 33-57		