Dipankar Bandyopadhyay

List of Publications by Year
in descending order

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107 papers	1,923 citations	257101 24 h-index	329751 37 g-index
107 all docs	107 docs citations	107 times ranked	1456 citing authors

#	Article	IF	Citations
1	Single and double toroid formation during oil droplet impact on an airâ€“water interface at low Reynolds number. Physics of Fluids, 2022, 34, .	1.6	8
2	Pathways to community transmission of COVIDâ€“19 due to rapid evaporation of respiratory virulets. Journal of Colloid and Interface Science, 2022, 619, 229-245.	5.0	6
3	Advances in Materials, Methods, and Principles of Modern Biosensing Tools. , 2022, , 33-57.		1
4	Influence of the pre-impact shape of an oil droplet on the post-impact flow dynamics at airâ€“water interface. Soft Matter, 2022, 18, 4102-4117.	1.2	5
5	Electric Field-Induced â€œTentillarâ€•Bridging of a Droplet Twin. Langmuir, 2022, 38, 7146-7156.	1.6	2
6	A coupled continuum-statistical model to predict interfacial deformation under an external field. Journal of Colloid and Interface Science, 2021, 587, 864-875.	5.0	7
7	Conductive Polymer Nanobiosensors. Environmental Chemistry for A Sustainable World, 2021, , 85-118.	0.3	1
8	Electric-Discharge-Mediated Jetting, Crowning, Bursting, and Atomization of a Droplet. Physical Review Applied, 2021, 15, .	1.5	2
9	Physicochemical defect guided dewetting of ultrathin films to fabricate nanoscale patterns. Nanotechnology, 2021, 32, 195303.	1.3	2
10	Genesis of electric field assisted microparticle assemblage in a dielectric fluid. Journal of Fluid Mechanics, 2021, 915, .	1.4	3
11	Self-organization of random copolymers to nanopatterns by localized e-beam dosing. Nanotechnology, 2021, 32, 285302.	1.3	3
12	Self-Organized Implanting of Micro/Nanofiltration Membranes in Advanced Flow Î¼-Reactors. ACS Applied Materials & Interfaces, 2021, 13, 19430-19442.	4.0	1
13	Noninvasive Point-of-Care Nanobiosensing of Cervical Cancer as an Auxiliary to Pap-Smear Test. ACS Applied Bio Materials, 2021, 4, 5378-5390.	2.3	10
14	Functional liquid droplets for analyte sensing and energy harvesting. Advances in Colloid and Interface Science, 2021, 294, 102453.	7.0	6
15	Graphite/RGO coated paper Î¼-electrolyzers for production and separation of hydrogen and oxygen. Energy, 2021, 228, 120490.	4.5	8
16	Real-time transport kinetics of drug encapsulated nanoparticles into apoptotic cancer cells inside microchannels. Nanotechnology, 2021, 32, 505704.	1.3	1
17	Multifunctional gold nanoparticles for biosensing. , 2021, , 331-366.		3
18	Multifunctional liquid marbles to stabilize and transport reactive fluids. Soft Matter, 2021, 17, 5084-5095.	1.2	5

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19	Self-Organized Liquid Crystal Droplets as Phototunable Softmasks. ACS Applied Materials & Interfaces, 2021, 13, 60697-60712.	4.0	1
20	Electroosmosis with Augmented Mixing in Rigid to Flexible Microchannels with Surface Patterns. Industrial & Engineering Chemistry Research, 2020, 59, 3717-3729.	1.8	13
21	Paper Based Enzymatic Chemiresistor for POC Detection of Ethanol in Human Breath. IEEE Sensors Journal, 2020, 20, 2278-2286.	2.4	19
22	Dipolar Alignment in a Ferroelectric Dielectric Layer of FeFETs to Boost Charge Mobility and Nonvolatile Memory. ACS Applied Electronic Materials, 2020, 2, 3187-3198.	2.0	8
23	Magnetotactic T-Budbots to Kill-n-Clean Biofilms. ACS Applied Materials & Interfaces, 2020, 12, 43352-43364.	4.0	21
24	Self-organized spreading of droplets to fluid toroids. Journal of Colloid and Interface Science, 2020, 578, 738-748.	5.0	5
25	Microfluidic Immunosensor for Point-of-Care-Testing of Beta-2-Microglobulin in Tear. ACS Sustainable Chemistry and Engineering, 2020, 8, 9268-9276.	3.2	15
26	Microdroplet based disposable sensor patch for detection of Î±-amylase in human blood serum. Biosensors and Bioelectronics, 2020, 165, 112333.	5.3	30
27	Magnetically Actuated Carbon Soot Nanoparticle-Based Catalytic CARBOts Coated with Ni/Pt Nanofilms for Water Detoxification and Oil-Spill Recovery. ACS Applied Nano Materials, 2020, 3, 3459-3470.	2.4	19
28	Microdroplet photofuel cells to harvest high-density energy and dye degradation. Nanoscale Advances, 2020, 2, 1613-1624.	2.2	4
29	Pattern-Directed Phase Transitions and VOC Sensing of Liquid Crystal Films. Industrial & Engineering Chemistry Research, 2020, 59, 1902-1913.	1.8	7
30	Multimodal chemo-/magneto-/phototaxis of 3G CNT-bots to power fuel cells. Microsystems and Nanoengineering, 2020, 6, 19.	3.4	11
31	Paper-Based Sensors for Point-of-Care Kidney Function Monitoring. IEEE Sensors Journal, 2020, 20, 9644-9651.	2.4	8
32	Magnetotactic curcumin iButtonbots as efficient bactericidal agents. Bulletin of Materials Science, 2020, 43, 1.	0.8	2
33	A computational study on osmotic chemotaxis of a reactive Janusbot. Physics of Fluids, 2020, 32, 112018.	1.6	3
34	Electric field assisted multicomponent reaction in a microfluidic reactor for superior conversion and yield. Electrophoresis, 2019, 40, 401-409.	1.3	1
35	Electrodynamic-contact-line-lithography with nematic liquid crystals for template-less E-writing of mesopatterns on soft surfaces. Nanoscale, 2019, 11, 16523-16533.	2.8	9
36	Acoustic Propulsion of Vitamin C Loaded Teabots for Targeted Oxidative Stress and Amyloid Therapeutics. ACS Applied Bio Materials, 2019, 2, 4571-4582.	2.3	9

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37	Graphene oxide nanohybrids for electron transfer-mediated antimicrobial activity. Nanoscale Advances, 2019, 1, 3727-3740.	2.2	12
38	Microfluidic Schottky-junction photovoltaics with superior efficiency stimulated by plasmonic nanoparticles and streaming potential. Nanoscale Advances, 2019, 1, 1155-1164.	2.2	6
39	Fabrication of pixelated liquid crystal nanostructures employing the contact line instabilities of droplets. Nanoscale, 2019, 11, 1680-1691.	2.8	5
40	Electric field mediated squeezing to bending transitions of interfacial instabilities for digitization and mixing of two-phase microflows. Physics of Fluids, 2019, 31, .	1.6	15
41	Paper-Sensors for Point-of-Care Monitoring of Drinking Water Quality. IEEE Sensors Journal, 2019, 19, 7936-7941.	2.4	23
42	Flexible Paper Touchpad for Parkinsonâ€™s Hand Tremor Detection. Sensors and Actuators A: Physical, 2019, 294, 164-172.	2.0	20
43	Effects of Fluidâ€“Structureâ€“Interaction and Surface Heterogeneity on the Electrophoresis of Microparticles. Industrial & Engineering Chemistry Research, 2019, 58, 6756-6766.	1.8	6
44	Electric field mediated von KÃ¡rmÃ¡n vortices in stratified microflows: transition from linear instabilities to coherent mixing. Journal of Fluid Mechanics, 2019, 865, 169-211.	1.4	15
45	Reusable nano-BG-FET for point-of-care estimation of ammonia and urea in human urine. Nanotechnology, 2019, 30, 145502.	1.3	18
46	Unexplored Pathways To Charge Storage in Supercapacitors. Journal of Physical Chemistry C, 2019, 123, 195-204.	1.5	14
47	Mechanisms of humidity sensing on a CdS nanoparticle coated paper sensor. Sensors and Actuators A: Physical, 2019, 285, 241-247.	2.0	38
48	Point-of-care-testing of Î±-amylase activity in human blood serum. Biosensors and Bioelectronics, 2019, 124-125, 75-81.	5.3	31
49	Formic acid powered reusable autonomous ferrobots for efficient hydrogen generation under ambient conditions. Journal of Materials Chemistry A, 2018, 6, 9209-9219.	5.2	11
50	Dynamics of deformation and pinch-off of a migrating compound droplet in a tube. Physical Review E, 2018, 97, 043112.	0.8	39
51	Electric field mediated elastic contact lithography of thin viscoelastic films for miniaturized and multiscale patterns. Soft Matter, 2018, 14, 3963-3977.	1.2	3
52	Electric field mediated separation of waterâ€“ethanol mixtures in carbon-nanotubes integrated in nanoporous graphene membranes. Faraday Discussions, 2018, 209, 259-271.	1.6	5
53	Boolean-chemotaxis of logibots deciphering the motions of self-propelling microorganisms. Soft Matter, 2018, 14, 3182-3191.	1.2	5
54	Electric-field-mediated instability modes and FrÃ©edericksz transition of thin nematic films. Journal of Fluid Mechanics, 2018, 834, 464-509.	1.4	6

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55	Micro-patterning of coatings on a fiber surface exploiting the contact instabilities of thin viscoelastic films. Physics of Fluids, 2018, 30, 114101.	1.6	10
56	Dynamics of drop formation from submerged orifices under the influence of electric field. Physics of Fluids, 2018, 30, 122104.	1.6	20
57	Self-Organized Large-Scale Integration of Mesoscale-Ordered Heterojunctions for Process-Intensified Photovoltaics. Physical Review Applied, 2018, 10, .	1.5	14
58	Steady and Oscillatory Lorentz-Force-Induced Transport and Digitization of Two-Phase Microflows. Physical Review Applied, 2018, 10, .	1.5	13
59	RGO-Paper Sensor for Point-of-Care Detection of Lipase in Blood Serum. , 2018, 2, 1-4.		12
60	UV-Ozone mediated miniaturization of dewetted polymeric nanostructures on graphene-oxide-flakes for enhanced Raman scattering. Carbon, 2017, 121, 612-624.	5.4	4
61	Nano-enabled paper humidity sensor for mobile based point-of-care lung function monitoring. Biosensors and Bioelectronics, 2017, 94, 544-551.	5.3	74
62	Magnetic Field Guided Chemotaxis of iMushbots for Targeted Anticancer Therapeutics. ACS Biomaterials Science and Engineering, 2017, 3, 1627-1640.	2.6	46
63	Pattern-Directed Ordering of Spin-Dewetted Liquid Crystal Micro- or Nanodroplets as Pixelated Light Reflectors and Locomotives. ACS Applied Materials & Interfaces, 2017, 9, 1066-1076.	4.0	19
64	Field induced anomalous spreading, oscillation, ejection, spinning, and breaking of oil droplets on a strongly slipping water surface. Faraday Discussions, 2017, 199, 115-128.	1.6	12
65	Formation of liquid drops at an orifice and dynamics of pinch-off in liquid jets. Physical Review E, 2017, 96, 013115.	0.8	22
66	Giant Slip Induced Anomalous Dewetting of an Ultrathin Film on a Viscous Sublayer. Scientific Reports, 2017, 7, 14776.	1.6	3
67	Electric field mediated spraying of miniaturized droplets inside microchannel. Electrophoresis, 2017, 38, 1450-1457.	1.3	28
68	Discrete electric field mediated droplet splitting in microchannels: Fission, Cascade, and Rayleigh modes. Electrophoresis, 2017, 38, 278-286.	1.3	24
69	Microfluidic Electrolyzers for Production and Separation of Hydrogen from Sea Water using Naturally Abundant Solar Energy. Energy Technology, 2017, 5, 1208-1217.	1.8	11
70	Paper Based Flexible Carbon-FET Devices by Embedding Si Nanoparticles in Graphite Channel. , 2017, , .		0
71	Hierarchical micro- and nanofabrication by pattern-directed contact instabilities of thin viscoelastic films. Physical Review Fluids, 2017, 2, .	1.0	6
72	Detection of organic vapours employing droplets having nanoparticles. , 2016, , .		1

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73	Influence of the mutable kinetic parameters on the adhesion and debonding of thin viscoelastic films. Journal of Colloid and Interface Science, 2016, 477, 109-122.	5.0	11
74	Magnetic field induced pushâ€"pull motility of liquibots. RSC Advances, 2016, 6, 107049-107056.	1.7	8
75	Organic vapour detection with nanoparticle suspended salt solution droplet and the effect of viscosity and vapour-source distance. , 2016, , .		0
76	Self-spinning nanoparticle laden microdroplets for sensing and energy harvesting. Nanoscale, 2016, 8, 6118-6128.	2.8	35
77	Paper-based Î±- amylase detector for point-of-care diagnostics. Biosensors and Bioelectronics, 2016, 78, 447-453.	5.3	60
78	Capillary force mediated flow patterns and nonâ€monotonic pressure drop characteristics of oilâ€water microflows. Canadian Journal of Chemical Engineering, 2015, 93, 1736-1743.	0.9	23
79	Magnetically guided chemical locomotion of self-propelling paperbots. RSC Advances, 2015, 5, 64444-64449.	1.7	22
80	Graphene based multifunctional superbots. Carbon, 2015, 89, 31-40.	5.4	44
81	Digitization of two-phase flow patterns in a microchannel induced by an external AC field. RSC Advances, 2015, 5, 29545-29551.	1.7	15
82	Solvent vapour mediated spontaneous healing of self-organized defects of liquid crystal films. Soft Matter, 2015, 11, 139-146.	1.2	22
83	Localized electric field induced transition and miniaturization of twoâ€phase flow patterns inside microchannels. Electrophoresis, 2014, 35, 2930-2937.	1.3	15
84	Multimodal chemoâ€"magnetic control of self-propelling microbots. Nanoscale, 2014, 6, 1398-1405.	2.8	46
85	The pH Taxis of an Intelligent Catalytic Microbot. Small, 2013, 9, 1916-1920.	5.2	102
86	Electric field induced instabilities of thin leaky bilayers: Pathways to unique morphologies and miniaturization. Journal of Chemical Physics, 2013, 138, 024705.	1.2	16
87	Electric field and van der Waals force induced instabilities in thin viscoelastic bilayers. Physics of Fluids, 2012, 24, .	1.6	13
88	From finite-amplitude equilibrium structures to dewetting in thin polymer films on chemically patterned substrates. Soft Matter, 2012, 8, 10394.	1.2	15
89	Electric-Field-Induced Instabilities in Thin Liquid Trilayers Confined between Patterned Electrodes. Journal of Physical Chemistry C, 2012, 116, 22847-22858.	1.5	16
90	Electric Field Induced Patterning of Thin Coatings on Fiber Surfaces. Journal of Physical Chemistry C, 2012, 116, 6215-6221.	1.5	8

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91	Electro-magnetic-field-induced flow and interfacial instabilities in confined stratified liquid layers. Theoretical and Computational Fluid Dynamics, 2012, 26, 23-28.	0.9	18
92	Switching of interfacial instabilities from the liquid/air interface to the liquid/liquid interface in a polymer bilayer. Soft Matter, 2011, 7, 8056.	1.2	12
93	Parametric study on instabilities in a two-layer electromagnetohydrodynamic channel flow confined between two parallel electrodes. Physical Review E, 2011, 83, 036313.	0.8	29
94	Multiscale Pattern Generation in Viscoelastic Polymer Films by Spatiotemporal Modulation of Electric Field and Control of Rheology. Advanced Functional Materials, 2011, 21, 324-335.	7.8	36
95	Surface instability of a thin electrolyte film undergoing coupled electroosmotic and electrophoretic flows in a microfluidic channel. Electrophoresis, 2011, 32, 3257-3267.	1.3	26
96	Instability and dewetting of ultrathin solid viscoelastic films onÂhomogeneous and heterogeneous substrates. Journal of Chemical Physics, 2011, 134, 064705.	1.2	13
97	Electric-fieldâ€“ and contact-forceâ€“induced tunable patterns in slipping soft elastic films. Europhysics Letters, 2010, 89, 36002.	0.7	14
98	Electric field induced microstructures in thin films on physicochemically heterogeneous and patterned substrates. Journal of Chemical Physics, 2010, 132, 174703.	1.2	26
99	Self-Organized Ordered Arrays of Coreâˆ’Shell Columns in Viscous Bilayers Formed by Spatially Varying Electric Fields. Journal of Physical Chemistry C, 2010, 114, 21020-21028.	1.5	30
100	Self-Organized Microstructures in Thin Bilayers on Chemically Patterned Substrates. Journal of Physical Chemistry C, 2010, 114, 2237-2247.	1.5	33
101	Embedded Microstructures by Electric-Field-Induced Pattern Formation in Interacting Thin Layers. Langmuir, 2010, 26, 10943-10952.	1.6	14
102	Electric-Field-Induced Interfacial Instabilities and Morphologies of Thin Viscous and Elastic Bilayers. Langmuir, 2009, 25, 9108-9118.	1.6	54
103	Control of morphology in pattern directed dewetting of thin polymer films. Soft Matter, 2008, 4, 2086.	1.2	111
104	Dewetting Pathways and Morphology of Unstable Thin Liquid Bilayers. Journal of Physical Chemistry B, 2008, 112, 11564-11572.	1.2	30
105	Nonlinear instabilities and pathways of rupture in thin liquid bilayers. Journal of Chemical Physics, 2006, 125, 054711.	1.2	50
106	Instability and Dynamics of Thin Liquid Bilayers. Industrial & Engineering Chemistry Research, 2005, 44, 1259-1272.	1.8	98
107	Acoustic Wave Catalyzed Urea Detection Utilizing a Pulsatile Microdroplet Sensor. ACS Sustainable Chemistry and Engineering, 0, , .	3.2	8