Dipankar Bandyopadhyay

List of Publications by Year
in descending order

107	1,923	257450 24	330143 37
papers	citations	h-index	g-index

107	107	107	1456
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Control of morphology in pattern directed dewetting of thin polymer films. Soft Matter, 2008, 4, 2086.	2.7	111
2	The pH Taxis of an Intelligent Catalytic Microbot. Small, 2013, 9, 1916-1920.	10.0	102
3	Instability and Dynamics of Thin Liquid Bilayers. Industrial & Engineering Chemistry Research, 2005, 44, 1259-1272.	3.7	98
4	Nano-enabled paper humidity sensor for mobile based point-of-care lung function monitoring. Biosensors and Bioelectronics, 2017, 94, 544-551.	10.1	74
5	Paper-based Î±- amylase detector for point-of-care diagnostics. Biosensors and Bioelectronics, 2016, 78, 447-453.	10.1	60
6	Electric-Field-Induced Interfacial Instabilities and Morphologies of Thin Viscous and Elastic Bilayers. Langmuir, 2009, 25, 9108-9118.	3.5	54
7	Nonlinear instabilities and pathways of rupture in thin liquid bilayers. Journal of Chemical Physics, 2006, 125, 054711.	3.0	50
8	Multimodal chemoâ€“magnetic control of self-propelling microbots. Nanoscale, 2014, 6, 1398-1405.	5.6	46
9	Magnetic Field Guided Chemotaxis of iMushbots for Targeted Anticancer Therapeutics. ACS Biomaterials Science and Engineering, 2017, 3, 1627-1640.	5.2	46
10	Graphene based multifunctional superbots. Carbon, 2015, 89, 31-40.	10.3	44
11	Dynamics of deformation and pinch-off of a migrating compound droplet in a tube. Physical Review E, 2018, 97, 043112.	2.1	39
12	Mechanisms of humidity sensing on a CdS nanoparticle coated paper sensor. Sensors and Actuators A: Physical, 2019, 285, 241-247.	4.1	38
13	Multiscale Pattern Generation in Viscoelastic Polymer Films by Spatiotemporal Modulation of Electric Field and Control of Rheology. Advanced Functional Materials, 2011, 21, 324-335.	14.9	36
14	Self-spinning nanoparticle laden microdroplets for sensing and energy harvesting. Nanoscale, 2016, 8, 6118-6128.	5.6	35
15	Self-Organized Microstructures in Thin Bilayers on Chemically Patterned Substrates. Journal of Physical Chemistry C, 2010, 114, 2237-2247.	3.1	33
16	Point-of-care-testing of Î±-amylase activity in human blood serum. Biosensors and Bioelectronics, 2019, 124-125, 75-81.	10.1	31
17	Dewetting Pathways and Morphology of Unstable Thin Liquid Bilayers. Journal of Physical Chemistry B, 2008, 112, 11564-11572.	2.6	30
18	Self-Organized Ordered Arrays of Coreâ^'Shell Columns in Viscous Bilayers Formed by Spatially Varying Electric Fields. Journal of Physical Chemistry C, 2010, 114, 21020-21028.	3.1	30

#	Article	IF	Citations
19	Microdroplet based disposable sensor patch for detection of Î±-amylase in human blood serum. Biosensors and Bioelectronics, 2020, 165, 112333.	10.1	30
20	Parametric study on instabilities in a two-layer electromagnetohydrodynamic channel flow confined between two parallel electrodes. Physical Review E, 2011, 83, 036313.	2.1	29
21	Electric field mediated spraying of miniaturized droplets inside microchannel. Electrophoresis, 2017, 38, 1450-1457.	2.4	28
22	Electric field induced microstructures in thin films on physicochemically heterogeneous and patterned substrates. Journal of Chemical Physics, 2010, 132, 174703.	3.0	26
23	Surface instability of a thin electrolyte film undergoing coupled electroosmotic and electrophoretic flows in a microfluidic channel. Electrophoresis, 2011, 32, 3257-3267.	2.4	26
24	Discrete electric field mediated droplet splitting in microchannels: Fission, Cascade, and Rayleigh modes. Electrophoresis, 2017, 38, 278-286.	2.4	24
25	Capillary force mediated flow patterns and nonâ€monotonic pressure drop characteristics of oilâ€water microflows. Canadian Journal of Chemical Engineering, 2015, 93, 1736-1743.	1.7	23
26	Paper-Sensors for Point-of-Care Monitoring of Drinking Water Quality. IEEE Sensors Journal, 2019, 19, 7936-7941.	4.7	23
27	Magnetically guided chemical locomotion of self-propelling paperbots. RSC Advances, 2015, 5, 64444-64449.	3.6	22
28	Solvent vapour mediated spontaneous healing of self-organized defects of liquid crystal films. Soft Matter, 2015, 11, 139-146.	2.7	22
29	Formation of liquid drops at an orifice and dynamics of pinch-off in liquid jets. Physical Review E, 2017, 96, 013115.	2.1	22
30	Magnetotactic T-Budbots to Kill-n-Clean Biofilms. ACS Applied Materials & Interfaces, 2020, 12, 43352-43364.	8.0	21
31	Dynamics of drop formation from submerged orifices under the influence of electric field. Physics of Fluids, 2018, 30, 122104.	4.0	20
32	Flexible Paper Touchpad for Parkinsonâ€™s Hand Tremor Detection. Sensors and Actuators A: Physical, 2019, 294, 164-172.	4.1	20
33	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.	8.0	19
34	Paper Based Enzymatic Chemiresistor for POC Detection of Ethanol in Human Breath. IEEE Sensors Journal, 2020, 20, 2278-2286.	4.7	19
35	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.	5.0	19
36	Electro-magnetic-field-induced flow and interfacial instabilities in confined stratified liquid layers. Theoretical and Computational Fluid Dynamics, 2012, 26, 23-28.	2.2	18

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37	Reusable nano-BG-FET for point-of-care estimation of ammonia and urea in human urine. Nanotechnology, 2019, 30, 145502.	2.6	18
38	Electric-Field-Induced Instabilities in Thin Liquid Trilayers Confined between Patterned Electrodes. Journal of Physical Chemistry C, 2012, 116, 22847-22858.	3.1	16
39	Electric field induced instabilities of thin leaky bilayers: Pathways to unique morphologies and miniaturization. Journal of Chemical Physics, 2013, 138, 024705.	3.0	16
40	From finite-amplitude equilibrium structures to dewetting in thin polymer films on chemically patterned substrates. Soft Matter, 2012, 8, 10394.	2.7	15
41	Localized electric field induced transition and miniaturization of twoâ€phase flow patterns inside microchannels. Electrophoresis, 2014, 35, 2930-2937.	2.4	15
42	Digitization of two-phase flow patterns in a microchannel induced by an external AC field. RSC Advances, 2015, 5, 29545-29551.	3.6	15
43	Electric field mediated squeezing to bending transitions of interfacial instabilities for digitization and mixing of two-phase microflows. Physics of Fluids, 2019, 31, .	4.0	15
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.	3.4	15
45	Microfluidic Immunosensor for Point-of-Care-Testing of Beta-2-Microglobulin in Tear. ACS Sustainable Chemistry and Engineering, 2020, 8, 9268-9276.	6.7	15
46	Electric-fieldâ€“ and contact-forceâ€“induced tunable patterns in slipping soft elastic films. Europhysics Letters, 2010, 89, 36002.	2.0	14
47	Embedded Microstructures by Electric-Field-Induced Pattern Formation in Interacting Thin Layers. Langmuir, 2010, 26, 10943-10952.	3.5	14
48	Self-Organized Large-Scale Integration of Mesoscale-Ordered Heterojunctions for Process-Intensified Photovoltaics. Physical Review Applied, 2018, 10, .	3.8	14
49	Unexplored Pathways To Charge Storage in Supercapacitors. Journal of Physical Chemistry C, 2019, 123, 195-204.	3.1	14
50	Instability and dewetting of ultrathin solid viscoelastic films onÂhomogeneous and heterogeneous substrates. Journal of Chemical Physics, 2011, 134, 064705.	3.0	13
51	Electric field and van der Waals force induced instabilities in thin viscoelastic bilayers. Physics of Fluids, 2012, 24, .	4.0	13
52	Steady and Oscillatory Lorentz-Force-Induced Transport and Digitization of Two-Phase Microflows. Physical Review Applied, 2018, 10, .	3.8	13
53	Electroosmosis with Augmented Mixing in Rigid to Flexible Microchannels with Surface Patterns. Industrial & Engineering Chemistry Research, 2020, 59, 3717-3729.	3.7	13
54	Switching of interfacial instabilities from the liquid/air interface to the liquid/liquid interface in a polymer bilayer. Soft Matter, 2011, 7, 8056.	2.7	12

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55	Field induced anomalous spreading, oscillation, ejection, spinning, and breaking of oil droplets on a strongly slipping water surface. Faraday Discussions, 2017, 199, 115-128.	3.2	12
56	RGO-Paper Sensor for Point-of-Care Detection of Lipase in Blood Serum. , 2018, 2, 1-4.		12
57	Graphene oxide nanohybrids for electron transfer-mediated antimicrobial activity. Nanoscale Advances, 2019, 1, 3727-3740.	4.6	12
58	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.	9.4	11
59	Microfluidic Electrolyzers for Production and Separation of Hydrogen from Sea Water using Naturally Abundant Solar Energy. Energy Technology, 2017, 5, 1208-1217.	3.8	11
60	Formic acid powered reusable autonomous ferrobots for efficient hydrogen generation under ambient conditions. Journal of Materials Chemistry A, 2018, 6, 9209-9219.	10.3	11
61	Multimodal chemo-/magneto-/phototaxis of 3G CNT-bots to power fuel cells. Microsystems and Nanoengineering, 2020, 6, 19.	7.0	11
62	Micro-patterning of coatings on a fiber surface exploiting the contact instabilities of thin viscoelastic films. Physics of Fluids, 2018, 30, 114101.	4.0	10
63	Noninvasive Point-of-Care Nanobiosensing of Cervical Cancer as an Auxiliary to Pap-Smear Test. ACS Applied Bio Materials, 2021, 4, 5378-5390.	4.6	10
64	Electrodynamic-contact-line-lithography with nematic liquid crystals for template-less E-writing of mesopatterns on soft surfaces. Nanoscale, 2019, 11, 16523-16533.	5.6	9
65	Acoustic Propulsion of Vitamin C Loaded Teabots for Targeted Oxidative Stress and Amyloid Therapeutics. ACS Applied Bio Materials, 2019, 2, 4571-4582.	4.6	9
66	Electric Field Induced Patterning of Thin Coatings on Fiber Surfaces. Journal of Physical Chemistry C, 2012, 116, 6215-6221.	3.1	8
67	Magnetic field induced pushâ€“pull motility of liquibots. RSC Advances, 2016, 6, 107049-107056.	3.6	8
68	Acoustic Wave Catalyzed Urea Detection Utilizing a Pulsatile Microdroplet Sensor. ACS Sustainable Chemistry and Engineering, 0, , .	6.7	8
69	Dipolar Alignment in a Ferroelectric Dielectric Layer of FeFETs to Boost Charge Mobility and Nonvolatile Memory. ACS Applied Electronic Materials, 2020, 2, 3187-3198.	4.3	8
70	Paper-Based Sensors for Point-of-Care Kidney Function Monitoring. IEEE Sensors Journal, 2020, 20, 9644-9651.	4.7	8
71	Graphite/RGO coated paper Î¼-electrolyzers for production and separation of hydrogen and oxygen. Energy, 2021, 228, 120490.	8.8	8
72	Single and double toroid formation during oil droplet impact on an airâ€“water interface at low Reynolds number. Physics of Fluids, 2022, 34, .	4.0	8

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73	Pattern-Directed Phase Transitions and VOC Sensing of Liquid Crystal Films. Industrial & Engineering Chemistry Research, 2020, 59, 1902-1913.	3.7	7
74	A coupled continuum-statistical model to predict interfacial deformation under an external field. Journal of Colloid and Interface Science, 2021, 587, 864-875.	9.4	7
75	Electric-field-mediated instability modes and FrÃ©edericksz transition of thin nematic films. Journal of Fluid Mechanics, 2018, 834, 464-509.	3.4	6
76	Microfluidic Schottky-junction photovoltaics with superior efficiency stimulated by plasmonic nanoparticles and streaming potential. Nanoscale Advances, 2019, 1, 1155-1164.	4.6	6
77	Effects of Fluidâ€“Structureâ€“Interaction and Surface Heterogeneity on the Electrophoresis of Microparticles. Industrial & Engineering Chemistry Research, 2019, 58, 6756-6766.	3.7	6
78	Functional liquid droplets for analyte sensing and energy harvesting. Advances in Colloid and Interface Science, 2021, 294, 102453.	14.7	6
79	Hierarchical micro- and nanofabrication by pattern-directed contact instabilities of thin viscoelastic films. Physical Review Fluids, 2017, 2, .	2.5	6
80	Pathways to community transmission of COVIDâ€“19 due to rapid evaporation of respiratory virulets. Journal of Colloid and Interface Science, 2022, 619, 229-245.	9.4	6
81	Electric field mediated separation of waterâ€“ethanol mixtures in carbon-nanotubes integrated in nanoporous graphene membranes. Faraday Discussions, 2018, 209, 259-271.	3.2	5
82	Boolean-chemotaxis of logibots deciphering the motions of self-propelling microorganisms. Soft Matter, 2018, 14, 3182-3191.	2.7	5
83	Fabrication of pixelated liquid crystal nanostructures employing the contact line instabilities of droplets. Nanoscale, 2019, 11, 1680-1691.	5.6	5
84	Self-organized spreading of droplets to fluid toroids. Journal of Colloid and Interface Science, 2020, 578, 738-748.	9.4	5
85	Multifunctional liquid marbles to stabilize and transport reactive fluids. Soft Matter, 2021, 17, 5084-5095.	2.7	5
86	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.	2.7	5
87	UV-Ozone mediated miniaturization of dewetted polymeric nanostructures on graphene-oxide-flakes for enhanced Raman scattering. Carbon, 2017, 121, 612-624.	10.3	4
88	Microdroplet photofuel cells to harvest high-density energy and dye degradation. Nanoscale Advances, 2020, 2, 1613-1624.	4.6	4
89	Giant Slip Induced Anomalous Dewetting of an Ultrathin Film on a Viscous Sublayer. Scientific Reports, 2017, 7, 14776.	3.3	3
90	Electric field mediated elastic contact lithography of thin viscoelastic films for miniaturized and multiscale patterns. Soft Matter, 2018, 14, 3963-3977.	2.7	3

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91	Genesis of electric field assisted microparticle assemblage in a dielectric fluid. Journal of Fluid Mechanics, 2021, 915, .	3.4	3
92	Self-organization of random copolymers to nanopatterns by localized e-beam dosing. Nanotechnology, 2021, 32, 285302.	2.6	3
93	Multifunctional gold nanoparticles for biosensing. , 2021, , 331-366.		3
94	A computational study on osmotic chemotaxis of a reactive Janusbot. Physics of Fluids, 2020, 32, 112018.	4.0	3
95	Magnetotactic curcumin iButtonbots as efficient bactericidal agents. Bulletin of Materials Science, 2020, 43, 1.	1.7	2
96	Electric-Discharge-Mediated Jetting, Crowning, Bursting, and Atomization of a Droplet. Physical Review Applied, 2021, 15, .	3.8	2
97	Physicochemical defect guided dewetting of ultrathin films to fabricate nanoscale patterns. Nanotechnology, 2021, 32, 195303.	2.6	2
98	Electric Field-Induced â€œTentillarâ€•Bridging of a Droplet Twin. Langmuir, 2022, 38, 7146-7156.	3.5	2
99	Detection of organic vapours employing droplets having nanoparticles. , 2016, , .		1
100	Electric field assisted multicomponent reaction in a microfluidic reactor for superior conversion and yield. Electrophoresis, 2019, 40, 401-409.	2.4	1
101	Conductive Polymer Nanobiosensors. Environmental Chemistry for A Sustainable World, 2021, , 85-118.	0.5	1
102	Self-Organized Implanting of Micro/Nanofiltration Membranes in Advanced Flow Î¼-Reactors. ACS Applied Materials & Interfaces, 2021, 13, 19430-19442.	8.0	1
103	Real-time transport kinetics of drug encapsulated nanoparticles into apoptotic cancer cells inside microchannels. Nanotechnology, 2021, 32, 505704.	2.6	1
104	Advances in Materials, Methods, and Principles of Modern Biosensing Tools. , 2022, , 33-57.		1
105	Self-Organized Liquid Crystal Droplets as Phototunable Softmasks. ACS Applied Materials & Interfaces, 2021, 13, 60697-60712.	8.0	1
106	Organic vapour detection with nanoparticle suspended salt solution droplet and the effect of viscosity and vapour-source distance. , 2016, , .		0
107	Paper Based Flexible Carbon-FET Devices by Embedding Si Nanoparticles in Graphite Channel. , 2017, , .		0