

Arunava Majumdar

List of Publications by Citations

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59
papers

14,058
citations

31
h-index

63
g-index

63
ext. papers

16,328
ext. citations

12.8
avg, IF

7.09
L-index

#	Paper	IF	Citations
59	Opportunities and challenges for a sustainable energy future. <i>Nature</i> , 2012 , 488, 294-303	50.4	5810
58	Nanostructured thermoelectrics: big efficiency gains from small features. <i>Advanced Materials</i> , 2010 , 22, 3970-80	24	1085
57	Nanoscale thermal transport. II. 2003–2012. <i>Applied Physics Reviews</i> , 2014 , 1, 011305	17.3	1050
56	Bioassay of prostate-specific antigen (PSA) using microcantilevers. <i>Nature Biotechnology</i> , 2001 , 19, 856-60	4.5	836
55	Materials science. Thermoelectricity in semiconductor nanostructures. <i>Science</i> , 2004 , 303, 777-8	33.3	795
54	Thermal conductance and thermopower of an individual single-wall carbon nanotube. <i>Nano Letters</i> , 2005 , 5, 1842-6	11.5	697
53	Thermometry and Thermal Transport in Micro/Nanoscale Solid-State Devices and Structures. <i>Journal of Heat Transfer</i> , 2002 , 124, 223-241	1.8	476
52	Ion Transport in Nanofluidic Channels. <i>Nano Letters</i> , 2004 , 4, 137-142	11.5	399
51	Thermal conductivity of Si/SiGe superlattice nanowires. <i>Applied Physics Letters</i> , 2003 , 83, 3186-3188	3.4	317
50	Cantilever-based optical deflection assay for discrimination of DNA single-nucleotide mismatches. <i>Analytical Chemistry</i> , 2001 , 73, 1567-71	7.8	300
49	Electrochemomechanical Energy Conversion in Nanofluidic Channels. <i>Nano Letters</i> , 2004 , 4, 2315-2321	11.5	260
48	A dual-mode textile for human body radiative heating and cooling. <i>Science Advances</i> , 2017 , 3, e1700895	14.3	222
47	Thermal Transport Mechanisms at Nanoscale Point Contacts. <i>Journal of Heat Transfer</i> , 2002 , 124, 329-337	7.8	185
46	Interfacial energy and strength of multiwalled-carbon-nanotube-based dry adhesive. <i>Journal of Vacuum Science & Technology B</i> , 2006 , 24, 331	179	
45	Scanning thermal microscopy of carbon nanotubes using batch-fabricated probes. <i>Applied Physics Letters</i> , 2000 , 77, 4295-4297	3.4	141
44	Design of Nanostructured Heterojunction Polymer Photovoltaic Devices. <i>Nano Letters</i> , 2003 , 3, 1729-1733	3.5	138
43	Interface and Strain Effects on the Thermal Conductivity of Heterostructures: A Molecular Dynamics Study. <i>Journal of Heat Transfer</i> , 2002 , 124, 963-970	1.8	130

42	Critical Knowledge Gaps in Mass Transport through Single-Digit Nanopores: A Review and Perspective. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 21309-21326	3.8	121
41	Mesoscopic thermal transport and energy dissipation in carbon nanotubes. <i>Physica B: Condensed Matter</i> , 2002 , 323, 67-70	2.8	101
40	Thermal probing of energy dissipation in current-carrying carbon nanotubes. <i>Journal of Applied Physics</i> , 2009 , 105, 104306	2.5	86
39	The use of poly-cation oxides to lower the temperature of two-step thermochemical water splitting. <i>Energy and Environmental Science</i> , 2018 , 11, 2172-2178	35.4	65
38	Cross-plane Seebeck coefficient of ErAs:InGaAs/InAlAs superlattices. <i>Journal of Applied Physics</i> , 2007 , 101, 034502	2.5	52
37	Universal and Solution-Processable Precursor to Bismuth Chalcogenide Thermoelectrics. <i>Chemistry of Materials</i> , 2010 , 22, 1943-1945	9.6	47
36	Bioassays based on molecular nanomechanics. <i>Disease Markers</i> , 2002 , 18, 167-74	3.2	47
35	Scanning Thermal Wave Microscopy (STWM). <i>Journal of Heat Transfer</i> , 2003 , 125, 156-163	1.8	35
34	Research Opportunities for CO ₂ Utilization and Negative Emissions at the Gigatonne Scale. <i>Joule</i> , 2018 , 2, 805-809	27.8	35
33	Thermoelectric power generator module of 16% Bi ₂ Te ₃ and 0.6% ErAs:(InGaAs) _{1-x} (InAlAs) _x segmented elements. <i>Applied Physics Letters</i> , 2009 , 95, 083503	3.4	33
32	Novel nanoscale thermal property imaging technique: The 2D-method. I. Principle and the 2D signal measurement. <i>Journal of Vacuum Science & Technology B</i> , 2006 , 24, 2398	32	
31	DNA-Based Programmed Assembly of Gold Nanoparticles on Lithographic Patterns with Extraordinary Specificity. <i>Nano Letters</i> , 2004 , 4, 1521-1524	11.5	32
30	Thermoelectric figure of merit of (In _{0.53} Ga _{0.47} As) _{0.8} (In _{0.52} Al _{0.48} As) _{0.2} III-V semiconductor alloys. <i>Physical Review B</i> , 2010 , 81,	3.3	31
29	Label-Free Electrical Detection of Enzymatic Reactions in Nanochannels. <i>ACS Nano</i> , 2016 , 10, 7476-84	16.7	30
28	Continuous electrochemical heat engines. <i>Energy and Environmental Science</i> , 2018 , 11, 2964-2971	35.4	28
27	ErAs:(InGaAs) _{1-x} (InAlAs) _x alloy power generator modules. <i>Applied Physics Letters</i> , 2007 , 91, 263510	3.4	26
26	Novel nanoscale thermal property imaging technique: The 2D-method. II. Demonstration and comparison. <i>Journal of Vacuum Science & Technology B</i> , 2006 , 24, 2405	24	
25	Thermal Conductance of Delamination Cracks in a Fiber-Reinforced Ceramic Composite. <i>Journal of the American Ceramic Society</i> , 2004 , 83, 553-562	3.8	19

24	Artificial inflation of apparent photocatalytic activity induced by catalyst-mass-normalization and a method to fairly compare heterojunction systems. <i>Energy and Environmental Science</i> , 2019 , 12, 1657-1667	35.4	18
23	Evaluation of a Silicon Sr Betavoltaic Power Source. <i>Scientific Reports</i> , 2016 , 6, 38182	4.9	17
22	Power Generator Modules of Segmented Bi ₂ Te ₃ and ErAs:(InGaAs)1-x(InAlAs)x. <i>Journal of Electronic Materials</i> , 2008 , 37, 1786-1792	1.9	15
21	Elucidating the synergistic mechanism of nickel-molybdenum electrocatalysts for the hydrogen evolution reaction. <i>MRS Communications</i> , 2016 , 6, 241-246	2.7	15
20	High-capacity thermochemical CO ₂ dissociation using iron-poor ferrites. <i>Energy and Environmental Science</i> , 2020 , 13, 592-600	35.4	12
19	Molecular dynamics simulation of the meniscus formation between two surfaces. <i>Applied Physics Letters</i> , 2001 , 79, 1267-1269	3.4	10
18	Reduced thermal conductivity in Er-doped epitaxial In _x Ga _{1-x} Sb alloys. <i>Applied Physics Letters</i> , 2013 , 103, 103102	3.4	9
17	Electrochemical Redox Refrigeration. <i>Scientific Reports</i> , 2019 , 9, 13945	4.9	8
16	Mechanics of liquid-liquid interfaces and mixing enhancement in microscale flows. <i>Journal of Fluid Mechanics</i> , 2010 , 652, 207-240	3.7	7
15	Tunable thermal conductivity in mesoporous silicon by slight porosity change. <i>Applied Physics Letters</i> , 2017 , 111, 063104	3.4	5
14	Photoabsorption Imaging at Nanometer Scales Using Secondary Electron Analysis. <i>Nano Letters</i> , 2021 , 21, 1935-1942	11.5	4
13	Transport of Biomolecules in the Ratcheting Electrophoresis Microchip (REM). <i>JSME International Journal Series B</i> , 2003 , 46, 593-599		3
12	Imaging Arrangements of Discrete Ions at Liquid-Solid Interfaces. <i>Nano Letters</i> , 2020 , 20, 7927-7932	11.5	3
11	High Thermoelectric Power Factor and ZT in TbAs:InGaAs Epitaxial Nanocomposite Material. <i>Advanced Electronic Materials</i> , 2019 , 5, 1900015	6.4	3
10	Computational discovery of metal oxides for chemical looping hydrogen production. <i>Cell Reports Physical Science</i> , 2021 , 2, 100362	6.1	2
9	Prospects for sub-nanometer scale imaging of optical phenomena using electron microscopy. <i>Applied Physics Letters</i> , 2021 , 118, 033104	3.4	2
8	Analysis of Governing Parameters for Silver-Silver Chloride Electrodes in Microfluidic Electrokinetic Devices. <i>Microscale Thermophysical Engineering</i> , 2005 , 9, 199-211		1
7	400 element ErAs:InGaAs/InGaAlAs superlattice power generator. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 886, 1		1

LIST OF PUBLICATIONS

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|---|--|------|---|
| 6 | Impedance of Thermal Conduction from Nanoconfined Water in Carbon Nanotube Single-Digit Nanopores. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 25717-25728 | 3.8 | 1 |
| 5 | A phytophotonic approach to enhanced photosynthesis. <i>Energy and Environmental Science</i> , 2020 , 13, 4794-4807 | 35.4 | 0 |
| 4 | Segmented Power Generator Modules of Bi ₂ Te ₃ and ErAs: InGaAlAs Embedded with ErAs Nanoparticles. <i>Materials Research Society Symposia Proceedings</i> , 2007 , 1044, 1 | | |
| 3 | Molecular Dynamics Simulation of Thermal Conductivity of Diamondoid Crystals. <i>Materials Research Society Symposia Proceedings</i> , 2007 , 1022, 1 | | |
| 2 | Enhanced thermoelectric performance of rough silicon nanowires 2010 , 111-115 | | |
| 1 | Design and Construction of an Optical TEM Specimen Holder. <i>Microscopy Today</i> , 2021 , 29, 40-44 | 0.4 | |