

# Arunava Majumdar

## 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.

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	Impedance of Thermal Conduction from Nanoconfined Water in Carbon Nanotube Single-Digit Nanopores. <i>Journal of Physical Chemistry C</i> , <b>2021</b> , 125, 25717-25728	3.8	1
58	Photoabsorption Imaging at Nanometer Scales Using Secondary Electron Analysis. <i>Nano Letters</i> , <b>2021</b> , 21, 1935-1942	11.5	4
57	Computational discovery of metal oxides for chemical looping hydrogen production. <i>Cell Reports Physical Science</i> , <b>2021</b> , 2, 100362	6.1	2
56	Design and Construction of an Optical TEM Specimen Holder. <i>Microscopy Today</i> , <b>2021</b> , 29, 40-44	0.4	
55	Prospects for sub-nanometer scale imaging of optical phenomena using electron microscopy. <i>Applied Physics Letters</i> , <b>2021</b> , 118, 033104	3.4	2
54	High-capacity thermochemical CO <sub>2</sub> dissociation using iron-poor ferrites. <i>Energy and Environmental Science</i> , <b>2020</b> , 13, 592-600	35.4	12
53	Imaging Arrangements of Discrete Ions at Liquid-Solid Interfaces. <i>Nano Letters</i> , <b>2020</b> , 20, 7927-7932	11.5	3
52	A phytophotonic approach to enhanced photosynthesis. <i>Energy and Environmental Science</i> , <b>2020</b> , 13, 4794-4807	35.4	0
51	Electrochemical Redox Refrigeration. <i>Scientific Reports</i> , <b>2019</b> , 9, 13945	4.9	8
50	Critical Knowledge Gaps in Mass Transport through Single-Digit Nanopores: A Review and Perspective. <i>Journal of Physical Chemistry C</i> , <b>2019</b> , 123, 21309-21326	3.8	121
49	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> , <b>2019</b> , 12, 1657-1667	35.4	18
48	High Thermoelectric Power Factor and ZT in TbAs:InGaAs Epitaxial Nanocomposite Material. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1900015	6.4	3
47	Continuous electrochemical heat engines. <i>Energy and Environmental Science</i> , <b>2018</b> , 11, 2964-2971	35.4	28
46	The use of poly-cation oxides to lower the temperature of two-step thermochemical water splitting. <i>Energy and Environmental Science</i> , <b>2018</b> , 11, 2172-2178	35.4	65
45	Research Opportunities for CO <sub>2</sub> Utilization and Negative Emissions at the Gigatonne Scale. <i>Joule</i> , <b>2018</b> , 2, 805-809	27.8	35
44	Tunable thermal conductivity in mesoporous silicon by slight porosity change. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 063104	3.4	5
43	A dual-mode textile for human body radiative heating and cooling. <i>Science Advances</i> , <b>2017</b> , 3, e1700895	14.3	222

42	Evaluation of a Silicon Sr Betavoltaic Power Source. <i>Scientific Reports</i> , <b>2016</b> , 6, 38182	4.9	17
41	Elucidating the synergistic mechanism of nickel-molybdenum electrocatalysts for the hydrogen evolution reaction. <i>MRS Communications</i> , <b>2016</b> , 6, 241-246	2.7	15
40	Label-Free Electrical Detection of Enzymatic Reactions in Nanochannels. <i>ACS Nano</i> , <b>2016</b> , 10, 7476-84	16.7	30
39	Nanoscale thermal transport. II. 2003–2012. <i>Applied Physics Reviews</i> , <b>2014</b> , 1, 011305	17.3	1050
38	Reduced thermal conductivity in Er-doped epitaxial $\text{In}_x\text{Ga}_{1-x}\text{Sb}$ alloys. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 103102	3.4	9
37	Opportunities and challenges for a sustainable energy future. <i>Nature</i> , <b>2012</b> , 488, 294-303	50.4	5810
36	Thermoelectric figure of merit of $(\text{In}0.53\text{Ga}0.47\text{As})0.8(\text{In}0.52\text{Al}0.48\text{As})0.2$ III-V semiconductor alloys. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	31
35	Universal and Solution-Processable Precursor to Bismuth Chalcogenide Thermoelectrics. <i>Chemistry of Materials</i> , <b>2010</b> , 22, 1943-1945	9.6	47
34	Mechanics of liquid–liquid interfaces and mixing enhancement in microscale flows. <i>Journal of Fluid Mechanics</i> , <b>2010</b> , 652, 207-240	3.7	7
33	Nanostructured thermoelectrics: big efficiency gains from small features. <i>Advanced Materials</i> , <b>2010</b> , 22, 3970-80	24	1085
32	Enhanced thermoelectric performance of rough silicon nanowires <b>2010</b> , 111-115		
31	Thermoelectric power generator module of $16\pm6\%$ $\text{Bi}_2\text{Te}_3$ and $0.6\%$ $\text{ErAs}:(\text{InGaAs})_{1-x}(\text{InAlAs})_x$ segmented elements. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 083503	3.4	33
30	Thermal probing of energy dissipation in current-carrying carbon nanotubes. <i>Journal of Applied Physics</i> , <b>2009</b> , 105, 104306	2.5	86
29	Power Generator Modules of Segmented $\text{Bi}_2\text{Te}_3$ and $\text{ErAs}:(\text{InGaAs})_{1-x}(\text{InAlAs})_x$ . <i>Journal of Electronic Materials</i> , <b>2008</b> , 37, 1786-1792	1.9	15
28	$\text{ErAs}:(\text{InGaAs})_{1-x}(\text{InAlAs})_x$ alloy power generator modules. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 263510	3.4	26
27	Cross-plane Seebeck coefficient of $\text{ErAs}:\text{InGaAs}/\text{InGaAlAs}$ superlattices. <i>Journal of Applied Physics</i> , <b>2007</b> , 101, 034502	2.5	52
26	Segmented Power Generator Modules of $\text{Bi}_2\text{Te}_3$ and $\text{ErAs}:\text{InGaAlAs}$ Embedded with $\text{ErAs}$ Nanoparticles. <i>Materials Research Society Symposia Proceedings</i> , <b>2007</b> , 1044, 1		
25	Molecular Dynamics Simulation of Thermal Conductivity of Diamondoid Crystals. <i>Materials Research Society Symposia Proceedings</i> , <b>2007</b> , 1022, 1		

24	Novel nanoscale thermal property imaging technique: The 2D-method. II. Demonstration and comparison. <i>Journal of Vacuum Science &amp; Technology B</i> , <b>2006</b> , 24, 2405	24
23	Novel nanoscale thermal property imaging technique: The 2D-method. I. Principle and the 2D signal measurement. <i>Journal of Vacuum Science &amp; Technology B</i> , <b>2006</b> , 24, 2398	32
22	Interfacial energy and strength of multiwalled-carbon-nanotube-based dry adhesive. <i>Journal of Vacuum Science &amp; Technology B</i> , <b>2006</b> , 24, 331	179
21	Analysis of Governing Parameters for Silver-Silver Chloride Electrodes in Microfluidic Electrokinetic Devices. <i>Microscale Thermophysical Engineering</i> , <b>2005</b> , 9, 199-211	1
20	Thermal conductance and thermopower of an individual single-wall carbon nanotube. <i>Nano Letters</i> , <b>2005</b> , 5, 1842-6	11.5 697
19	400 element ErAs:InGaAs/InGaAlAs superlattice power generator. <i>Materials Research Society Symposia Proceedings</i> , <b>2005</b> , 886, 1	1
18	Thermal Conductance of Delamination Cracks in a Fiber-Reinforced Ceramic Composite. <i>Journal of the American Ceramic Society</i> , <b>2004</b> , 83, 553-562	3.8 19
17	Materials science. Thermoelectricity in semiconductor nanostructures. <i>Science</i> , <b>2004</b> , 303, 777-8	33.3 795
16	DNA-Based Programmed Assembly of Gold Nanoparticles on Lithographic Patterns with Extraordinary Specificity. <i>Nano Letters</i> , <b>2004</b> , 4, 1521-1524	11.5 32
15	Ion Transport in Nanofluidic Channels. <i>Nano Letters</i> , <b>2004</b> , 4, 137-142	11.5 399
14	Electrochemomechanical Energy Conversion in Nanofluidic Channels. <i>Nano Letters</i> , <b>2004</b> , 4, 2315-2321	11.5 260
13	Transport of Biomolecules in the Ratcheting Electrophoresis Microchip (REM). <i>JSME International Journal Series B</i> , <b>2003</b> , 46, 593-599	3
12	Thermal conductivity of Si/SiGe superlattice nanowires. <i>Applied Physics Letters</i> , <b>2003</b> , 83, 3186-3188	3.4 317
11	Design of Nanostructured Heterojunction Polymer Photovoltaic Devices. <i>Nano Letters</i> , <b>2003</b> , 3, 1729-1733	3.5 138
10	Scanning Thermal Wave Microscopy (STWM). <i>Journal of Heat Transfer</i> , <b>2003</b> , 125, 156-163	1.8 35
9	Bioassays based on molecular nanomechanics. <i>Disease Markers</i> , <b>2002</b> , 18, 167-74	3.2 47
8	Mesoscopic thermal transport and energy dissipation in carbon nanotubes. <i>Physica B: Condensed Matter</i> , <b>2002</b> , 323, 67-70	2.8 101
7	Thermometry and Thermal Transport in Micro/Nanoscale Solid-State Devices and Structures. <i>Journal of Heat Transfer</i> , <b>2002</b> , 124, 223-241	1.8 476

## LIST OF PUBLICATIONS

6	Interface and Strain Effects on the Thermal Conductivity of Heterostructures: A Molecular Dynamics Study. <i>Journal of Heat Transfer</i> , <b>2002</b> , 124, 963-970	1.8	130
5	Thermal Transport Mechanisms at Nanoscale Point Contacts. <i>Journal of Heat Transfer</i> , <b>2002</b> , 124, 329-337.8	185	
4	Bioassay of prostate-specific antigen (PSA) using microcantilevers. <i>Nature Biotechnology</i> , <b>2001</b> , 19, 856-60.5	836	
3	Molecular dynamics simulation of the meniscus formation between two surfaces. <i>Applied Physics Letters</i> , <b>2001</b> , 79, 1267-1269	3.4	10
2	Cantilever-based optical deflection assay for discrimination of DNA single-nucleotide mismatches. <i>Analytical Chemistry</i> , <b>2001</b> , 73, 1567-71	7.8	300
1	Scanning thermal microscopy of carbon nanotubes using batch-fabricated probes. <i>Applied Physics Letters</i> , <b>2000</b> , 77, 4295-4297	3.4	141