Sohini Kar-Narayan

List of Publications by Year
in descending order

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86 papers	4,861 citations	117453 34 h-index	95083 68 g-index
87 all docs	87 docs citations	87 times ranked	5182 citing authors

#	Article	IF	Citations
1	Caloric materials near ferroic phase transitions. Nature Materials, 2014, 13, 439-450.	13.3	1,129
2	Giant Electrocaloric Strength in Singleâ€Crystal BaTiO₃. Advanced Materials, 2013, 25, 1360-1365.	11.1	430
3	A Scalable Nanogenerator Based on Selfâ€Poled Piezoelectric Polymer Nanowires with High Energy Conversion Efficiency. Advanced Energy Materials, 2014, 4, 1400519.	10.2	176
4	Electroactive polymers for sensing. Interface Focus, 2016, 6, 20160026.	1.5	158
5	Enhanced Piezoelectricity of Electrospun Polyvinylidene Fluoride Fibers for Energy Harvesting. ACS Applied Materials & Interfaces, 2020, 12, 13575-13583.	4.0	148
6	The Electrocaloric Efficiency of Ceramic and Polymer Films. Advanced Materials, 2013, 25, 3337-3342.	11.1	123
7	Controlling and assessing the quality of aerosol jet printed features for large area and flexible electronics. Flexible and Printed Electronics, 2017, 2, 015004.	1.5	121
8	Surface potential and roughness controlled cell adhesion and collagen formation in electrospun PCL fibers for bone regeneration. Materials and Design, 2020, 194, 108915.	3.3	112
9	Predicted cooling powers for multilayer capacitors based on various electrocaloric and electrode materials. Applied Physics Letters, 2009, 95, .	1.5	105
10	Enhanced ferromagnetic transition temperature in nanocrystalline lanthanum calcium manganese oxide (La0.67Ca0.33MnO3). Solid State Communications, 2004, 129, 479-483.	0.9	103
11	Piezoelectric polymers: theory, challenges and opportunities. International Materials Reviews, 2022, 67, 65-88.	9.4	103
12	A triboelectric generator based on self-poled Nylon-11 nanowires fabricated by gas-flow assisted template wetting. Energy and Environmental Science, 2017, 10, 2180-2189.	15.6	91
13	Piezoelectric Nylonâ€11 Nanowire Arrays Grown by Template Wetting for Vibrational Energy Harvesting Applications. Advanced Functional Materials, 2017, 27, 1604262.	7.8	91
14	PST thin films for electrocaloric coolers. Journal Physics D: Applied Physics, 2011, 44, 165407.	1.3	90
15	Fully Printed Organicâ€“Inorganic Nanocomposites for Flexible Thermoelectric Applications. ACS Applied Materials & Interfaces, 2018, 10, 19580-19587.	4.0	87
16	Linear anhysteretic direct magnetoelectric effect in Ni_{0.5}Zn_{0.5}Fe₂O₄/poly(vinylidene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 437 Td (flu	1.3	84
17	Nanostructured polymer-based piezoelectric and triboelectric materials and devices for energy harvesting applications. Journal Physics D: Applied Physics, 2018, 51, 303001.	1.3	82
18	Materialsâ€Related Strategies for Highly Efficient Triboelectric Energy Generators. Advanced Energy Materials, 2021, 11, 2003802.	10.2	73

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19	Template-Assisted Hydrothermal Growth of Aligned Zinc Oxide Nanowires for Piezoelectric Energy Harvesting Applications. ACS Applied Materials & Interfaces, 2016, 8, 13678-13683.	4.0	69
20	Surface potential tailoring of PMMA fibers by electrospinning for enhanced triboelectric performance. Nano Energy, 2019, 57, 500-506.	8.2	67
21	Modified energy harvesting figures of merit for stress- and strain-driven piezoelectric systems. European Physical Journal: Special Topics, 2019, 228, 1537-1554.	1.2	66
22	Caloric Effects in Perovskite Oxides. Advanced Materials Interfaces, 2019, 6, 1900291.	1.9	66
23	Fabrication of ordered array of nanowires of La0.67Ca0.33MnO3 (x=0.33) in alumina templates with enhanced ferromagnetic transition temperature. Applied Physics Letters, 2004, 84, 993-995.	1.5	63
24	Triboelectric Yarns with Electrospun Functional Polymer Coatings for Highly Durable and Washable Smart Textile Applications. ACS Applied Materials & Interfaces, 2021, 13, 16876-16886.	4.0	59
25	Polymer-based nanopiezoelectric generators for energy harvesting applications. Materials Science and Technology, 2014, 30, 1613-1624.	0.8	57
26	Biosensors Based on Mechanical and Electrical Detection Techniques. Sensors, 2020, 20, 5605.	2.1	55
27	3D-printed hierarchical pillar array electrodes for high-performance semi-artificial photosynthesis. Nature Materials, 2022, 21, 811-818.	13.3	48
28	Energy harvesting performance of piezoelectric ceramic and polymer nanowires. Nanotechnology, 2015, 26, 344001.	1.3	47
29	Direct electrocaloric measurement of 0.9Pb(Mg1/3Nb2/3)O3-0.1PbTiO3 films using scanning thermal microscopy. Applied Physics Letters, 2016, 108, .	1.5	46
30	Direct observation of shear piezoelectricity in poly-<scp>l</scp>-lactic acid nanowires. APL Materials, 2017, 5, .	2.2	44
31	Freestanding Functional Structures by Aerosolâ€Jet Printing for Stretchable Electronics and Sensing Applications. Advanced Materials Technologies, 2019, 4, 1900048.	3.0	42
32	Surface Potential Driven Water Harvesting from Fog. ACS Nano, 2021, 15, 8848-8859.	7.3	40
33	Aerosolâ€Jet Printed Fineâ€Featured Triboelectric Sensors for Motion Sensing. Advanced Materials Technologies, 2019, 4, 1800328.	3.0	38
34	Finite-element optimisation of electrocaloric multilayer capacitors. Applied Physics Letters, 2014, 104, .	1.5	35
35	Vertically aligned zinc oxide nanowires electrodeposited within porous polycarbonate templates for vibrational energy harvesting. Nanotechnology, 2016, 27, 28LT02.	1.3	33
36	Self-assembly of collagen bundles and enhanced piezoelectricity induced by chemical crosslinking. Nanoscale, 2019, 11, 15120-15130.	2.8	33

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37	Observation of Confinementâ€Induced Selfâ€Poling Effects in Ferroelectric Polymer Nanowires Grown by Template Wetting. Macromolecular Materials and Engineering, 2016, 301, 1016-1025.	1.7	32
38	Unprecedented dipole alignment in Î±-phase nylon-11 nanowires for high-performance energy-harvesting applications. Science Advances, 2020, 6, eaay5065.	4.7	30
39	Enhanced thermoelectric properties of flexible aerosol-jet printed carbon nanotube-based nanocomposites. APL Materials, 2018, 6, .	2.2	29
40	Converse magnetoelectric coupling in multilayer capacitors. Applied Physics Letters, 2008, 93, .	1.5	28
41	Nylonâ€11 nanowires for triboelectric energy harvesting. EcoMat, 2020, 2, e12063.	6.8	27
42	Poly-<scp>l</scp>-Lactic Acid Nanotubes as Soft Piezoelectric Interfaces for Biology: Controlling Cell Attachment via Polymer Crystallinity. ACS Applied Bio Materials, 2020, 3, 2140-2149.	2.3	27
43	Mapping piezoelectric response in nanomaterials using a dedicated non-destructive scanning probe technique. Nanoscale, 2017, 9, 19290-19297.	2.8	23
44	Aerosol-jet printing facilitates the rapid prototyping of microfluidic devices with versatile geometries and precise channel functionalization. Applied Materials Today, 2020, 19, 100618.	2.3	22
45	Eliminating the Temperature Dependence of the Response of Magnetoelectric Magnetic-Field Sensors. IEEE Sensors Journal, 2010, 10, 914-917.	2.4	21
46	Nanoscale electromechanical properties of template-assisted hierarchical self-assembled cellulose nanofibers. Nanoscale, 2018, 10, 16812-16821.	2.8	21
47	Mechanical Energy Harvesting Performance of Ferroelectric Polymer Nanowires Grown via Templateâ€Wetting. Energy Technology, 2018, 6, 928-934.	1.8	20
48	The effect of crystal structure on the electromechanical properties of piezoelectric Nylon-11 nanowires. Chemical Communications, 2018, 54, 6863-6866.	2.2	20
49	FullyPrinted Flexible Plasmonic Metafilms with Directional Color Dynamics. Advanced Science, 2021, 8, 2002419.	5.6	20
50	Leadâ€Free Polycrystalline Ferroelectric Nanowires with Enhanced Curie Temperature. Advanced Functional Materials, 2017, 27, 1701169.	7.8	19
51	Exploring piezoelectric properties of IIIâ€“V nanowires using piezo-response force microscopy. Semiconductor Science and Technology, 2017, 32, 074006.	1.0	18
52	Structure and Thermoelectric Properties of Bi2â€™xSbxTe3 Nanowires Grown in Flexible Nanoporous Polycarbonate Templates. Materials, 2017, 10, 553.	1.3	18
53	Localized electromechanical interactions in ferroelectric P(VDF-TrFE) nanowires investigated by scanning probe microscopy. APL Materials, 2016, 4, .	2.2	17
54	Aerosol-jet-printed, conformable microfluidic force sensors. Cell Reports Physical Science, 2021, 2, 100386.	2.8	17

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55	Large electrocaloric effect in lead-free ferroelectric Ba0.85Ca0.15Ti0.9Zr0.1O3 thin film heterostructure. APL Materials, 2021, 9, .	2.2	16
56	Highly sensitive piezotronic pressure sensors based on undoped GaAs nanowire ensembles. Journal Physics D: Applied Physics, 2019, 52, 294002.	1.3	15
57	Compositionally Graded Organicâ€“Inorganic Nanocomposites for Enhanced Thermoelectric Performance. Advanced Electronic Materials, 2020, 6, 1900720.	2.6	15
58	Spatially resolved study of electronic transport through grain boundaries in nanostructured films ofLa0.67Sr0.33MnO3. Physical Review B, 2006, 74, .	1.1	13
59	Electrocaloric Materials for Cooling Applications. Ferroelectrics, 2012, 433, 107-110.	0.3	12
60	Needs and Enabling Technologies for Stretchable Electronics Commercialization. MRS Advances, 2017, 2, 1721-1729.	0.5	11
61	Enhanced Molecular Alignment in Polyâ€•l â€Lactic Acid Nanotubes Induced via Meltâ€Press Templateâ€Wetting. Macromolecular Materials and Engineering, 2019, 304, 1800607.	1.7	11
62	Time-resolved open-circuit conductive atomic force microscopy for direct electromechanical characterisation. Nanotechnology, 2020, 31, 404003.	1.3	11
63	A fluctuation-based characterization of athermal phase transitions: Application to shape memory alloys. Acta Materialia, 2009, 57, 6113-6122.	3.8	10
64	Piezoelectricity in non-nitride IIIâ€“V nanowires: Challenges and opportunities. Journal of Materials Research, 2018, 33, 611-624.	1.2	10
65	Coaxial Nickelâ€“Poly(vinylidene fluoride trifluoroethylene) Nanowires for Magnetoelectric Applications. ACS Applied Nano Materials, 2019, 2, 170-179.	2.4	10
66	Enhanced piezoelectricity and electromechanical efficiency in semiconducting GaN due to nanoscale porosity. Applied Materials Today, 2020, 21, 100858.	2.3	10
67	Electro-responsive surfaces with controllable wrinkling patterns for switchable light reflectionâ€“diffusionâ€“grating devices. Materials Today, 2020, 41, 51-61.	8.3	10
68	Route to High-Performance Micro-solid Oxide Fuel Cells on Metallic Substrates. ACS Applied Materials & Interfaces, 2021, 13, 4117-4125.	4.0	9
69	Strain-Mediated Bending of InP Nanowires through the Growth of an Asymmetric InAs Shell. Nanomaterials, 2019, 9, 1327.	1.9	8
70	Tailoring the triboelectric output of poly-L-lactic acid nanotubes through control of polymer crystallinity. JPhys Materials, 2021, 4, 034010.	1.8	8
71	Sliding charge-density waves in manganites. Nature Materials, 2010, 9, 688-688.	13.3	6
72	Improper ferroelectricity in lawsonite CaAl2Si2O7(OH)2Â·H2O: hysteresis and hydrogen ordering. Journal of Physics Condensed Matter, 2011, 23, 222202.	0.7	6

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73	Piezoelectric Semiconducting Nanowires. Semiconductors and Semimetals, 2018, , 445-478.	0.4	6
74	Investigation of the Effect of Microstructure and Grain Boundaries in Nanostructured CMR Thin Films Using Scanning Tunneling Microscopy (STM) and Local Conductance Map (LCMAP). IEEE Nanotechnology Magazine, 2006, 5, 707-711.	1.1	5
75	Influence of the thermal contact resistance in current-induced domain wall depinning. Journal Physics D: Applied Physics, 2017, 50, 325001.	1.3	5
76	Localized reversible nanoscale phase separation in Pr0.63Ca0.37MnO3 single crystal using a scanning tunneling microscope tip. Applied Physics Letters, 2007, 91, 143124.	1.5	4
77	Effect of Grain Boundaries on the Local Electronic Transport in Nanostructured Films of Colossal Magnetoresistive Manganites. Journal of Nanoscience and Nanotechnology, 2007, 7, 2051-2054.	0.9	4
78	Tunnelling anisotropic magnetoresistance at La0.67Sr0.33MnO3-graphene interfaces. Applied Physics Letters, 2016, 108, 112405.	1.5	4
79	Conformable and robust microfluidic force sensors to enable precision joint replacement surgery. Materials and Design, 2022, 219, 110747.	3.3	4
80	The absence of charge-density-wave sliding in epitaxial charge-ordered Pr_{0.48}Ca_{0.52}MnO₃films. Journal of Physics Condensed Matter, 2010, 22, 275602.	0.7	3
81	Role of oxygen vacancies on the low-temperature dielectric relaxor behavior in epitaxial <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Ba</mml:mi><mml:mrow><mml:mn>0.9</mml:mn><mml:mn>0.85</mml:mn></mathvariant. Physical Review Materials, 2021, 5, .	3.1	3
82	Temperature dependence of the gap in the density of states near the Fermi level in a hole doped manganite. Solid State Communications, 2005, 136, 410-415.	0.9	2
83	Manufacturing routes toward flexible and smart energy harvesters and sensors based on functional nanomaterials. , 2020, , 381-437.		2
84	Nanogenerators: A Scalable Nanogenerator Based on Self-Poled Piezoelectric Polymer Nanowires with High Energy Conversion Efficiency (Adv. Energy Mater. 18/2014). Advanced Energy Materials, 2014, 4, n/a-n/a.	10.2	1
85	Aerosol Jet Printing as a Versatile Sample Preparation Method for Operando Electrochemical TEM Microdevices. Advanced Materials Interfaces, 2022, 9, .	1.9	1
86	5th International Conference on Materials and Applications for Sensors and Transducers (IC-MAST2015). IOP Conference Series: Materials Science and Engineering, 2016, 108, 011001.	0.3	0