Deb Roy

List of Publications by Year
in descending order

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45	3,758	186265	243625
papers	citations	28 h-index	44 g-index

45	45	45	5582
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Growth process conditions of vertically aligned carbon nanotubes using plasma enhanced chemical vapor deposition. Journal of Applied Physics, 2001, 90, 5308-5317.	2.5	1,034
2	Effect of disorder on Raman scattering of single-layer<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2015, 91, .	3.2	553
3	Multifunctional Nanoprobes for Nanoscale Chemical Imaging and Localized Chemical Delivery at Surfaces and Interfaces. Angewandte Chemie - International Edition, 2011, 50, 9638-9642.	13.8	256
4	Characterisation of carbon nano-onions using Raman spectroscopy. Chemical Physics Letters, 2003, 373, 52-56.	2.6	252
5	Nanoscale mapping of catalytic activity using tip-enhanced Raman spectroscopy. Nanoscale, 2015, 7, 7133-7137.	5.6	124
6	Tip-enhanced Raman spectroscopy: principles and applications. EPJ Techniques and Instrumentation, 2015, 2, .	1.3	115
7	Singleâ€Molecule Reconstruction of Oligonucleotide Secondary Structure by Atomic Force Microscopy. Small, 2014, 10, 3257-3261.	10.0	96
8	Tipâ€enhanced Raman spectroscopy â€“ an interlaboratory reproducibility and comparison study. Journal of Raman Spectroscopy, 2014, 45, 22-31.	2.5	94
9	Nanoscale mapping of excitonic processes in single-layer MoS₂ using tip-enhanced photoluminescence microscopy. Nanoscale, 2016, 8, 10564-10569.	5.6	80
10	Growth of high-quality single-wall carbon nanotubes without amorphous carbon formation. Applied Physics Letters, 2004, 84, 269-271.	3.3	79
11	The European nanometrology landscape. Nanotechnology, 2011, 22, 062001.	2.6	69
12	Fibre swelling during laser drilling of carbon fibre composites. Optics and Lasers in Engineering, 2006, 44, 1185-1197.	3.8	63
13	Quantitative characterization of defect size in graphene using Raman spectroscopy. Applied Physics Letters, 2014, 105, .	3.3	61
14	Ag nanoparticle induced surface enhanced Raman spectroscopy of chemical vapor deposition diamond thin films prepared by hot filament chemical vapor deposition. Journal of Applied Physics, 2002, 91, 6085-6088.	2.5	59
15	Transforming bilayer MoS2 into single-layer with strong photoluminescence using UV-ozone oxidation. Nano Research, 2015, 8, 3878-3886.	10.4	58
16	Visualizing graphene edges using tip-enhanced Raman spectroscopy. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, .	1.2	56
17	Probing carbon nanoparticles inCNxthin films using Raman spectroscopy. Physical Review B, 2004, 70, .	3.2	51
18	Fabrication of gold tips suitable for tip-enhanced Raman spectroscopy. Journal of Vacuum Science & Technology B, 2008, 26, 1761.	1.3	50

#	Article	IF	Citations
19	Accurate measurement of enhancement factor in tip-enhanced Raman spectroscopy through elimination of far-field artefacts. Applied Physics Letters, 2014, 104, 123106.	3.3	47
20	Novel methodology for estimating the enhancement factor for tip-enhanced Raman spectroscopy. Journal of Applied Physics, 2009, 105, .	2.5	40
21	Synthesis and Raman spectroscopic characterisation of carbon nanoscrolls. Chemical Physics Letters, 2008, 465, 254-257.	2.6	39
22	Nanoscale imaging of carbon nanotubes using tip enhanced Raman spectroscopy in reflection mode. Faraday Discussions, 2006, 132, 215-225.	3.2	38
23	Nanoscale mapping of intrinsic defects in single-layer graphene using tip-enhanced Raman spectroscopy. Chemical Communications, 2016, 52, 8227-8230.	4.1	38
24	Thin-film metal catalyst for the production of multi-wall and single-wall carbon nanotubes. Journal of Applied Physics, 2004, 96, 4456-4462.	2.5	37
25	Measurement of interfacial shear strength in single wall carbon nanotubes reinforced composite using Raman spectroscopy. Journal of Applied Physics, 2010, 107, .	2.5	35
26	Probing individual point defects in graphene via near-field Raman scattering. Nanoscale, 2015, 7, 19413-19418.	5.6	35
27	Extending the plasmonic lifetime of tip-enhanced Raman spectroscopy probes. Physical Chemistry Chemical Physics, 2016, 18, 13710-13716.	2.8	35
28	Surface and subsurface morphology of operating nanowire:fullerene solar cells revealed by photoconductive-AFM. Energy and Environmental Science, 2011, 4, 3646.	30.8	30
29	Effects of KI Encapsulation in Single-Walled Carbon Nanotubes by Raman and Optical Absorption Spectroscopy. Journal of Physical Chemistry B, 2006, 110, 13848-13857.	2.6	28
30	Directly writing with nanoparticles at the nanoscale using dip-pen nanolithography. Applied Surface Science, 2007, 254, 1394-1398.	6.1	28
31	Simultaneous topographical, electrical and optical microscopy of optoelectronic devices at the nanoscale. Nanoscale, 2017, 9, 2723-2731.	5.6	25
32	State of the art Raman techniques for biological applications. Methods, 2014, 68, 338-347.	3.8	24
33	Viability of sub-0.4-nm diameter carbon nanotubes. Physical Review B, 2002, 66, .	3.2	22
34	Effects of temperature and ammonia flow rate on the chemical vapour deposition growth of nitrogen-doped graphene. Physical Chemistry Chemical Physics, 2014, 16, 19446.	2.8	21
35	Single-crystal gold tip for tip-enhanced Raman spectroscopy. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, 631-634.	1.2	20
36	High resolution Raman imaging of single wall carbon nanotubes using electrochemically etched gold tips and a radially polarized annular beam. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2010, 28, 472-475.	2.1	19

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37	Imaging surfaces of nanoâ€scale roughness by atomic force microscopy with carbon nanotubes as tips: a comparative study. Surface and Interface Analysis, 2011, 43, 1382-1391.	1.8	10
38	Strain gradients along the growth direction in thin diamond film deposited on silicon wafer. Journal of Applied Physics, 2003, 94, 136-139.	2.5	8
39	A Simple Bioconjugate Attachment Protocol for Use in Single Molecule Force Spectroscopy Experiments Based on Mixed Self-Assembled Monolayers. International Journal of Molecular Sciences, 2012, 13, 13521-13541.	4.1	8
40	Measurement of the Interaction Between Recombinant I-domain from Integrin alpha 2 beta 1 and a Triple Helical Collagen Peptide with the GFOGER Binding Motif Using Molecular Force Spectroscopy. International Journal of Molecular Sciences, 2013, 14, 2832-2845.	4.1	8
41	Self-assembled lamellar structures with functionalized single wall carbon nanotubes. Chemical Communications, 2007, , 4248.	4.1	6
42	Study of structure-function relationships in platinum-silica catalysts using hydrocarbon hydrogenation as a probe reaction. Chemical Engineering Science, 2003, 58, 621-626.	3.8	5
43	Does hydrogen change the fullerenelike structure in CNx thin films?. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2009, 27, 1227-1230.	2.1	1
44	Prospects of the Emerging Raman Scattering Tools for Surface and Nanoanalysis. Mapan - Journal of Metrology Society of India, 2013, 28, 285-297.	1.5	1
45	Nano-Science and Nano-metrology for Societal Benefits. Mapan - Journal of Metrology Society of India, 2013, 28, 237-238.	1.5	0