Hugh H Richardson

List of Publications by Year
in descending order

50	4,116	279487 23	223531 46
papers	citations	h-index	g-index

50	50	50	4922
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Generating heat with metal nanoparticles. Nano Today, 2007, 2, 30-38.	6.2	1,167
2	Experimental and Theoretical Studies of Light-to-Heat Conversion and Collective Heating Effects in Metal Nanoparticle Solutions. Nano Letters, 2009, 9, 1139-1146.	4.5	608
3	Gold nanoparticle ensembles as heaters and actuators: melting and collective plasmon resonances. Nanoscale Research Letters, 2006, 1, 84-90.	3.1	582
4	Thermooptical Properties of Gold Nanoparticles Embedded in Ice:â€‰ Characterization of Heat Generation and Melting. Nano Letters, 2006, 6, 783-788.	4.5	257
5	Two-dimensional FT-IR correlation analysis of the phase transitions in a liquid crystal, 4â€²-n-octyl-4-cyanobiphenyl (8CB). Vibrational Spectroscopy, 2000, 24, 137-146.	1.2	232
6	Superheating Water by CW Excitation of Gold Nanodots. Nano Letters, 2012, 12, 1534-1537.	4.5	109
7	Local Temperature Determination of Optically Excited Nanoparticles and Nanodots. Nano Letters, 2011, 11, 1061-1069.	4.5	103
8	Structural Characterization of Î²-Lactoglobulin in Solution Using Two-Dimensional FT Mid-Infrared and FT Near-Infrared Correlation Spectroscopy. Applied Spectroscopy, 1997, 51, 536-540.	1.2	99
9	Epitaxial growth of CO on NaCl(100) studied by infrared spectroscopy. Journal of Chemical Physics, 1988, 89, 7561-7568.	1.2	87
10	Infrared spectroscopy of CO on NaCl(100). Surface Science, 1989, 216, 93-104.	0.8	76
11	FTâ€IR spectra of vacuum deposited clathrate hydrates of oxirane H2S, THF, and ethane. Journal of Chemical Physics, 1985, 83, 4387-4394.	1.2	71
12	Infrared spectroscopy of CO on NaCl(100). II. Vibrational dephasing and band shapes. Journal of Chemical Physics, 1990, 92, 2099-2105.	1.2	69
13	Experimental and Theoretical Observation of Photothermal Chirality in Gold Nanoparticle Helicoids. ACS Nano, 2020, 14, 4188-4195.	7.3	57
14	Infrared spectroscopy and thermodynamic measurements of CO on NaCl films. Surface Science, 1987, 185, 15-35.	0.8	50
15	Comparison of Vapor Formation of Water at the Solid/Water Interface to Colloidal Solutions Using Optically Excited Gold Nanostructures. ACS Nano, 2014, 8, 1439-1448.	7.3	49
16	Mobile Bjerrum defects: A criterion for iceâ€like crystal growth. Journal of Chemical Physics, 1987, 87, 4126-4131.	1.2	47
17	Two-Dimensional FT-IR Correlation Analysis of the Chemisorption of Nitric Oxide on Pt(100). Applied Spectroscopy, 1999, 53, 178-183.	1.2	38
18	Effects of static spectrum removal and noise on 2D-correlation spectra of kinetic data. Analytica Chimica Acta, 1998, 368, 45-57.	2.6	36

#	Article	IF	Citations
19	Thermo-optical Responses of Nanoparticles: Melting of Ice and Nanocalorimetry Approach. Journal of Electronic Materials, 2007, 36, 1587-1593.	1.0	27
20	Effect of Temperature and Gold Nanoparticle Interaction on the Lifetime and Luminescence of NaYF₄:Yb³⁺:Er³⁺ Upconverting Nanoparticles. ACS Photonics, 2017, 4, 1864-1869.	3.2	27
21	Infrared spectrqscopy of CO on NaCl film and NaCl(100). Journal of Electron Spectroscopy and Related Phenomena, 1987, 45, 99-111.	0.8	25
22	Growth of Thin Film Water on Î±-Al₂O₃ (0001): An FTIR Study. Journal of Physical Chemistry C, 2008, 112, 20033-20037.	1.5	25
23	Visible Luminescent Activation of Amorphous AlN:Eu Thin-Film Phosphors with Oxygen. MRS Internet Journal of Nitride Semiconductor Research, 2001, 6, 1.	1.0	24
24	Quantitative Analysis of a Binary Mixture by Fourier Transform Infrared Photoacoustic Spectroscopy. Applied Spectroscopy, 1981, 35, 185-186.	1.2	23
25	FTâ€IR investigation of proton transfer in irradiated ice at 90 K in the absence of mobile bjerrum defects. Journal of Chemical Physics, 1984, 81, 3250-3255.	1.2	19
26	Optical Measurement of Thermal Conductivity and Absorption Cross-Section of Gold Nanowires. Journal of Physical Chemistry C, 2012, 116, 8798-8803.	1.5	18
27	Infrared spectroscopy of CH4, CH2D2 and CD4 adsorbed on sodium chloride films. Journal of Molecular Structure, 1987, 157, 167-185.	1.8	16
28	Nanothermometry using optically trapped erbium oxide nanoparticle. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	16
29	Near-field thermal imaging of optically excited gold nanostructures: scaling principles for collective heating with heat dissipation into the surrounding medium. Nanoscale, 2018, 10, 941-948.	2.8	16
30	Time-Resolved Temperature-Jump Measurements and Theoretical Simulations of Nanoscale Heat Transfer Using NaYF₄:Yb³⁺:Er³⁺ Upconverting Nanoparticles. Journal of Physical Chemistry C, 2019, 123, 3770-3780.	1.5	16
31	Spatial enhancement of Raman scattering images using moving-window two-dimensional auto-correlation spectroscopy. Journal of Molecular Structure, 2010, 974, 52-55.	1.8	13
32	Absorption Cross Section and Interfacial Thermal Conductance from an Individual Optically Excited Single-Walled Carbon Nanotube. ACS Nano, 2011, 5, 7391-7396.	7.3	13
33	Ultrasensitive Molecular Detection Using Thermal Conductance of a Hydrophobic Goldâ€“Water Interface. Nano Letters, 2013, 13, 4142-4147.	4.5	13
34	Targeted Nanoparticle Thermometry: A Method to Measure Local Temperature at the Nanoscale Point Where Water Vapor Nucleation Occurs. Small, 2017, 13, 1601989.	5.2	13
35	Characterization and Application of an Infrared Linear Array Spectrometer for Time-Resolved Infrared Spectroscopy. Applied Spectroscopy, 1993, 47, 1626-1630.	1.2	12
36	A Novel Infrared Spectrometer Using a Linear Array Detector. Applied Spectroscopy, 1990, 44, 822-825.	1.2	11

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37	In situ infrared reflectionâ€“absorption spectroscopic characterization of sustained kinetic oscillations in the Pt(100)/NO+CO system. Surface Science, 1998, 417, 189-200.	0.8	11
38	2D-IR correlation and principle component analysis of interfacial melting of thin ice films. Journal of Molecular Structure, 2006, 799, 56-60.	1.8	10
39	Thermal Effects of Colloidal Suspensions of Au Nanoparticles. Materials Research Society Symposia Proceedings, 2009, 1172, 60.	0.1	8
40	Effect of Ions and Ionic Strength on Surface Plasmon Absorption of Single Gold Nanowires. ACS Nano, 2016, 10, 6080-6089.	7.3	8
41	2D-IR correlation analysis of thin film water adsorbed on Î±-Al2O3(0001). Journal of Molecular Structure, 2006, 799, 158-162.	1.8	6
42	Thermo-optical Properties of Nanoparticles and Nanoparticle Complexes Embedded in Ice: Characterization of Heat Generation and Actuation of Larger-scale Effects. Materials Research Society Symposia Proceedings, 2006, 964, 1.	0.1	3
43	Time Resolved Temperature Measurement of Single Gold Structures via Luminescence Thermometry. MRS Advances, 2018, 3, 747-751.	0.5	2
44	Time-resolved universal temperature measurements using NaYF4:Er3+,Yb3+ upconverting nanoparticles in an electrospray jet. Beilstein Journal of Nanotechnology, 2018, 9, 2916-2924.	1.5	2
45	Heat transport across a gold nanowire/water interface enhanced by the solution ionic strength. Materials Research Society Symposia Proceedings, 2015, 1779, 33-38.	0.1	1
46	Time-resolved temperature-jump measurements and steady-state thermal imaging of nanoscale heat transfer of gold nanostructures on AlGaN:Er3+ thin films. Journal of Chemical Physics, 2020, 152, 034706.	1.2	1
47	Thermal Transport Properties of Nanostructures Immobilized Substrates. Materials Research Society Symposia Proceedings, 2009, 1172, 7.	0.1	0
48	Gold Nanowire Scattering and Absorption Measurements. Materials Research Society Symposia Proceedings, 2011, 1347, 1.	0.1	0
49	Solute Effects on Interfacial Thermal Conductance. Materials Research Society Symposia Proceedings, 2013, 1543, 151-157.	0.1	0
50	Optical Probe Thermometry Using Optically Trapped Erbium Oxide Nanoparticles. Materials Research Society Symposia Proceedings, 2015, 1779, 59-67.	0.1	0