

Hugh H Richardson

List of Publications by Citations

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50
papers

3,538
citations

22
h-index

50
g-index

50
ext. papers

3,841
ext. citations

6.1
avg, IF

5.35
L-index

#	Paper	IF	Citations
50	Generating heat with metal nanoparticles. <i>Nano Today</i> , 2007 , 2, 30-38	17.9	987
49	Gold nanoparticle ensembles as heaters and actuators: melting and collective plasmon resonances. <i>Nanoscale Research Letters</i> , 2006 , 1, 84-90	5	493
48	Experimental and theoretical studies of light-to-heat conversion and collective heating effects in metal nanoparticle solutions. <i>Nano Letters</i> , 2009 , 9, 1139-46	11.5	483
47	Thermo-optical properties of gold nanoparticles embedded in ice: characterization of heat generation and melting. <i>Nano Letters</i> , 2006 , 6, 783-8	11.5	234
46	Two-dimensional FT-IR correlation analysis of the phase transitions in a liquid crystal, 4'-n-octyl-4-cyanobiphenyl (8CB). <i>Vibrational Spectroscopy</i> , 2000 , 24, 137-146	2.1	220
45	Superheating water by CW excitation of gold nanodots. <i>Nano Letters</i> , 2012 , 12, 1534-7	11.5	101
44	Structural Characterization of β -Lactoglobulin in Solution Using Two-Dimensional FT Mid-Infrared and FT Near-Infrared Correlation Spectroscopy. <i>Applied Spectroscopy</i> , 1997 , 51, 536-540	3.1	92
43	Local temperature determination of optically excited nanoparticles and nanodots. <i>Nano Letters</i> , 2011 , 11, 1061-9	11.5	90
42	Epitaxial growth of CO on NaCl(100) studied by infrared spectroscopy. <i>Journal of Chemical Physics</i> , 1988 , 89, 7561-7568	3.9	83
41	Infrared spectroscopy of CO on NaCl(100). <i>Surface Science</i> , 1989 , 216, 93-104	1.8	70
40	FT-IR spectra of vacuum deposited clathrate hydrates of oxirane H ₂ S, THF, and ethane. <i>Journal of Chemical Physics</i> , 1985 , 83, 4387-4394	3.9	65
39	Infrared spectroscopy of CO on NaCl(100). II. Vibrational dephasing and band shapes. <i>Journal of Chemical Physics</i> , 1990 , 92, 2099-2105	3.9	64
38	Comparison of vapor formation of water at the solid/water interface to colloidal solutions using optically excited gold nanostructures. <i>ACS Nano</i> , 2014 , 8, 1439-48	16.7	46
37	Mobile Bjerrum defects: A criterion for ice-like crystal growth. <i>Journal of Chemical Physics</i> , 1987 , 87, 4126-4131	9.4	143
36	Infrared spectroscopy and thermodynamic measurements of CO on NaCl films. <i>Surface Science</i> , 1987 , 185, 15-35	1.8	43
35	Two-Dimensional FT-IR Correlation Analysis of the Chemisorption of Nitric Oxide on Pt(100). <i>Applied Spectroscopy</i> , 1999 , 53, 178-183	3.1	37
34	Effects of static spectrum removal and noise on 2D-correlation spectra of kinetic data. <i>Analytica Chimica Acta</i> , 1998 , 368, 45-57	6.6	34

33	Experimental and Theoretical Observation of Photothermal Chirality in Gold Nanoparticle Helicoids. <i>ACS Nano</i> , 2020 , 14, 4188-4195	16.7	31
32	Thermo-optical Responses of Nanoparticles: Melting of Ice and Nanocalorimetry Approach. <i>Journal of Electronic Materials</i> , 2007 , 36, 1587-1593	1.9	25
31	Infrared spectroscopy of CO on NaCl film and NaCl(100). <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1987 , 45, 99-111	1.7	24
30	Effect of Temperature and Gold Nanoparticle Interaction on the Lifetime and Luminescence of NaYF ₄ :Yb ³⁺ :Er ³⁺ Upconverting Nanoparticles. <i>ACS Photonics</i> , 2017 , 4, 1864-1869	6.3	23
29	Growth of Thin Film Water on α -Al ₂ O ₃ (0001): An FTIR Study. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 20033-20037	3.8	23
28	Visible Luminescent Activation of Amorphous AlN:Eu Thin-Film Phosphors with Oxygen. <i>MRS Internet Journal of Nitride Semiconductor Research</i> , 2001 , 6, 1		21
27	FT-IR investigation of proton transfer in irradiated ice at 90 K in the absence of mobile Bjerrum defects. <i>Journal of Chemical Physics</i> , 1984 , 81, 3250-3255	3.9	18
26	Quantitative Analysis of a Binary Mixture by Fourier Transform Infrared Photoacoustic Spectroscopy. <i>Applied Spectroscopy</i> , 1981 , 35, 185-186	3.1	17
25	Optical Measurement of Thermal Conductivity and Absorption Cross-Section of Gold Nanowires. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 8798-8803	3.8	15
24	Infrared spectroscopy of CH ₄ , CH ₂ D ₂ and CD ₄ adsorbed on sodium chloride films. <i>Journal of Molecular Structure</i> , 1987 , 157, 167-185	3.4	14
23	Near-field thermal imaging of optically excited gold nanostructures: scaling principles for collective heating with heat dissipation into the surrounding medium. <i>Nanoscale</i> , 2018 , 10, 941-948	7.7	12
22	Nanothermometry using optically trapped erbium oxide nanoparticle. <i>Applied Physics A: Materials Science and Processing</i> , 2016 , 122, 1	2.6	12
21	Ultrasensitive molecular detection using thermal conductance of a hydrophobic gold-water interface. <i>Nano Letters</i> , 2013 , 13, 4142-7	11.5	12
20	Time-Resolved Temperature-Jump Measurements and Theoretical Simulations of Nanoscale Heat Transfer Using NaYF ₄ :Yb ³⁺ :Er ³⁺ Upconverting Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 3770-3780	3.8	11
19	Absorption cross section and interfacial thermal conductance from an individual optically excited single-walled carbon nanotube. <i>ACS Nano</i> , 2011 , 5, 7391-6	16.7	11
18	Spatial enhancement of Raman scattering images using moving-window two-dimensional auto-correlation spectroscopy. <i>Journal of Molecular Structure</i> , 2010 , 974, 52-55	3.4	11
17	Characterization and Application of an Infrared Linear Array Spectrometer for Time-Resolved Infrared Spectroscopy. <i>Applied Spectroscopy</i> , 1993 , 47, 1626-1630	3.1	11
16	Targeted Nanoparticle Thermometry: A Method to Measure Local Temperature at the Nanoscale Point Where Water Vapor Nucleation Occurs. <i>Small</i> , 2017 , 13, 1601989	11	10

15	A Novel Infrared Spectrometer Using a Linear Array Detector. <i>Applied Spectroscopy</i> , 1990 , 44, 822-825	3.1	10
14	In situ infrared reflection-absorption spectroscopic characterization of sustained kinetic oscillations in the Pt(100)/NO+CO system. <i>Surface Science</i> , 1998 , 417, 189-200	1.8	9
13	2D-IR correlation and principle component analysis of interfacial melting of thin ice films. <i>Journal of Molecular Structure</i> , 2006 , 799, 56-60	3.4	8
12	Effect of Ions and Ionic Strength on Surface Plasmon Absorption of Single Gold Nanowires. <i>ACS Nano</i> , 2016 , 10, 6080-9	16.7	7
11	Thermal Effects of Colloidal Suspensions of Au Nanoparticles. <i>Materials Research Society Symposia Proceedings</i> , 2009 , 1172, 60		6
10	2D-IR correlation analysis of thin film water adsorbed on α -Al ₂ O ₃ (0001). <i>Journal of Molecular Structure</i> , 2006 , 799, 158-162	3.4	5
9	Time Resolved Temperature Measurement of Single Gold Structures via Luminescence Thermometry. <i>MRS Advances</i> , 2018 , 3, 747-751	0.7	2
8	Thermo-Optical Properties of Nanoparticles and Nanoparticle Complexes Embedded in Ice: Characterization of Heat Generation and Actuation of Larger-Scale Effects. <i>Materials Research Society Symposia Proceedings</i> , 2006 , 964, 1		2
7	Time-resolved universal temperature measurements using NaYF ₃ :Er,Yb upconverting nanoparticles in an electrospray jet. <i>Beilstein Journal of Nanotechnology</i> , 2018 , 9, 2916-2924	3	2
6	Heat transport across a gold nanowire/water interface enhanced by the solution ionic strength. <i>Materials Research Society Symposia Proceedings</i> , 2015 , 1779, 33-38		1
5	Time-resolved temperature-jump measurements and steady-state thermal imaging of nanoscale heat transfer of gold nanostructures on AlGaIn:Er thin films. <i>Journal of Chemical Physics</i> , 2020 , 152, 034708	2.8	0
4	Optical Probe Thermometry Using Optically Trapped Erbium Oxide Nanoparticles. <i>Materials Research Society Symposia Proceedings</i> , 2015 , 1779, 59-67		
3	Solute Effects on Interfacial Thermal Conductance. <i>Materials Research Society Symposia Proceedings</i> , 2013 , 1543, 151-157		
2	Thermal Transport Properties of Nanostructures Immobilized Substrates. <i>Materials Research Society Symposia Proceedings</i> , 2009 , 1172, 7		
1	Gold Nanowire Scattering and Absorption Measurements. <i>Materials Research Society Symposia Proceedings</i> , 2011 , 1347, 1		