

# Benoit Rousseau

## List of Publications by Year in descending order

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59  
papers

926  
citations

430874

18  
h-index

501196

28  
g-index

61  
all docs

61  
docs citations

61  
times ranked

718  
citing authors

#	ARTICLE	IF	CITATIONS
1	Investigations of the radiative properties of Al <sup>+</sup> NiP foams using tomographic images and stereoscopic micrographs. International Journal of Heat and Mass Transfer, 2012, 55, 1606-1619.	4.8	71
2	Temperature Measurement: Christiansen Wavelength and Blackbody Reference. International Journal of Thermophysics, 2005, 26, 1277-1286.	2.1	69
3	Radiative thermal rectification between SiC and SiO <sub>2</sub> . Optics Express, 2015, 23, A1388.	3.4	65
4	Transport properties and in-situ Raman spectroscopy study of BaCe <sub>0.9</sub> Y <sub>0.1</sub> O <sub>3</sub> as a function of water partial pressures. Solid State Ionics, 2011, 191, 24-31.	2.7	50
5	High emissivity of a rough Pr <sub>2</sub> NiO <sub>4</sub> coating. Applied Physics Letters, 2001, 79, 3633-3635.	3.3	39
6	High-Temperature Radiative Properties of an Ytria-Stabilized Hafnia Ceramic. Journal of the American Ceramic Society, 2011, 94, 1859-1864.	3.8	39
7	High performance computation of radiative transfer equation using the finite element method. Journal of Computational Physics, 2018, 360, 74-92.	3.8	38
8	Simple method for measuring the spectral absorption cross-section of microalgae. Chemical Engineering Science, 2016, 146, 357-368.	3.8	33
9	Representative elementary volumes required to characterize the normal spectral emittance of silicon carbide foams used as volumetric solar absorbers. International Journal of Heat and Mass Transfer, 2016, 93, 118-129.	4.8	33
10	Textural parameters influencing the radiative properties of a semitransparent porous media. International Journal of Thermal Sciences, 2011, 50, 178-186.	4.9	30
11	3D numerical modelling of the propagation of radiative intensity through a X-ray tomographed ligament. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 194, 86-97.	2.3	30
12	A simple expression for the normal spectral emittance of open-cell foams composed of optically thick and smooth struts. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 189, 329-338.	2.3	29
13	Polar lattice dynamics of the MgAl <sub>2</sub> O <sub>4</sub> spinel up to the liquid state. Journal of Physics Condensed Matter, 2006, 18, 5669-5686.	1.8	27
14	High Temperature Infrared Properties of YSZ Electrolyte Ceramics for SOFCs: Experimental Determination and Theoretical Modeling. Journal of the American Ceramic Society, 2011, 94, 4310-4316.	3.8	26
15	Prediction of the thermal radiative properties of an x-ray tomographed porous silica glass. Applied Optics, 2007, 46, 4266.	2.1	25
16	Use of cerium ethylhexanoate solutions for preparation of CeO <sub>2</sub> buffer layers by spin coating. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2003, 104, 185-191.	3.5	22
17	Dispersion Relations and Phase Retrieval in Infrared Reflection Spectra Analysis. Applied Spectroscopy, 2001, 55, 774-780.	2.2	20
18	Directional spectral reflectivity measurements of a carbon fibre reinforced composite up to 450 °C. International Journal of Heat and Mass Transfer, 2017, 112, 882-890.	4.8	20

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19	Specular reflection treatment for the 3D radiative transfer equation solved with the discrete ordinates method. <i>Journal of Computational Physics</i> , 2017, 334, 541-572.	3.8	19
20	Solution of the 2-D steady-state radiative transfer equation in participating media with specular reflections using SUPG and DG finite elements. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2016, 179, 149-164.	2.3	17
21	Infrared reflectance, transmittance, and emittance spectra of MgO from first principles. <i>Physical Review B</i> , 2018, 98, .	3.2	15
22	Piecewise Polynomial Dielectric Function Model and its Application for the Retrieval of Optical Functions. <i>Applied Spectroscopy</i> , 2007, 61, 644-648.	2.2	13
23	Spectroscopic diagnostics of morphological changes arising in thermal processing of polypropylene. <i>Applied Optics</i> , 2014, 53, 2702.	1.8	13
24	Vectorial finite elements for solving the radiative transfer equation. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018, 212, 59-74.	2.3	13
25	Preconditioned Krylov subspace methods for solving radiative transfer problems with scattering and reflection. <i>Computers and Mathematics With Applications</i> , 2019, 77, 1453-1465.	2.7	13
26	Conductive-radiative heat transfer within SiC-based cellular ceramics at high-temperatures: A discrete-scale finite element analysis. <i>Finite Elements in Analysis and Design</i> , 2020, 178, 103410.	3.2	12
27	Synchrotron x-ray $\mu$ -tomography to model the thermal radiative properties of an opaque ceramic coating at $T = 1000$ K. <i>Journal of Materials Research</i> , 2010, 25, 1890-1897.	2.6	10
28	A wavelet multi-scale method for the inverse problem of diffuse optical tomography. <i>Journal of Computational and Applied Mathematics</i> , 2015, 289, 267-281.	2.0	10
29	EVOLUTION OF THE HOMOGENIZED VOLUMETRIC RADIATIVE PROPERTIES OF A FAMILY OF $\beta$ -SiC FOAMS WITH GROWING NOMINAL PORE DIAMETER. <i>Journal of Porous Media</i> , 2015, 18, 1031-1045.	1.9	10
30	Oxygen isotopic effect on the IR reflectivity spectra of a La <sub>2</sub> NiO <sub>4.14</sub> single crystal. <i>Solid State Sciences</i> , 2004, 6, 1131-1137.	3.2	9
31	Prediction of thermal radiative properties (300–1000 K) of La <sub>2</sub> NiO <sub>4+<math>\delta</math></sub> ceramics. <i>Applied Physics Letters</i> , 2010, 97, 181917.	3.3	9
32	Modelling of the radiative properties of an opaque porous ceramic layer. <i>Journal of Electroceramics</i> , 2011, 27, 89-92.	2.0	9
33	Retrieval of Linear Optical Functions from Finite Range Spectra. <i>Applied Spectroscopy</i> , 2007, 61, 1390-1397.	2.2	8
34	Temperature effect (300–1500K) on the infrared photon transport inside an X-ray microtomographic reconstructed porous silica glass. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2007, 104, 257-265.	2.3	8
35	Modeling of time-resolved coupled radiative and conductive heat transfer in multilayer semitransparent materials up to very high temperatures. <i>Applied Physics Letters</i> , 2011, 99, .	3.3	7
36	Ad hoc angular discretization of the radiative transfer equation. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2019, 225, 301-318.	2.3	7

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37	CeO <sub>2</sub> epitaxial films by spray MOD. Journal of the European Ceramic Society, 2005, 25, 2185-2189.	5.7	6
38	Combined synchrotron x-ray diffraction and micro-Raman for following in situ the growth of solution-deposited YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> thin films. Journal of Materials Research, 2005, 20, 3270-3273.	2.6	5
39	Modeling heat transfer within porous multiconstituent materials. Journal of Physics: Conference Series, 2012, 369, 012001.	0.4	5
40	Prediction of the radiative properties of reconstructed alpha-SiC foams used for concentrated solar applications. Materials Research Society Symposia Proceedings, 2013, 1545, 1.	0.1	5
41	Characterisation of YBa <sub>2</sub> Cu <sub>3</sub> O <sub>6+x</sub> films grown by the trifluoro-acetate metal organic decomposition route by infrared spectroscopy. Thin Solid Films, 2006, 515, 1607-1611.	1.8	4
42	Regularization opportunities for the diffuse optical tomography problem. International Journal of Thermal Sciences, 2015, 98, 1-23.	4.9	4
43	Study by molecular dynamics of the influence of temperature and pressure on the optical properties of undoped 3C-SiC structures. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 205, 220-229.	2.3	4
44	Effect of Processing Temperature on Radiative Properties of Polypropylene and Heat Transfer in the Pure and Glassfibre Reinforced Polymer. , 2014, , .		4
45	A numerical method based on domain decomposition to solve coupled conduction-radiation physics using parallel computing within large porous media. Journal of Physics: Conference Series, 2021, 2116, 012057.	0.4	4
46	High-Temperature Radiative Behavior of an La <sub>2</sub> NiO <sub>4</sub> +Î´ Cathodic Layer for SOFCs (up to 900Â°C): Influence of Î´ and Texture. Journal of the American Ceramic Society, 2011, 94, 2535-2541.	3.8	3
47	Functionalization of SiC-based materials by a selective YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> -Î´ coating via solâ€“gel route in order to optimize their optical properties. Thin Solid Films, 2015, 596, 18-23.	1.8	3
48	Modelling of the Thermal Radiative Properties of Oxide Ceramics. , 2010, , .		2
49	Identification of the Radiative Properties of Î±-SiC Foams Realistically Designed With a Numerical Generator. , 2014, , .		2
50	Resistive substrate heater for film processing by spray pyrolysis. Review of Scientific Instruments, 2004, 75, 2884-2886.	1.3	1
51	Material Parameters Influencing the Radiative Properties of Heterogeneous Optically Thick Oxide Ceramics. , 2009, , .		1
52	Towards the development of simple methods for determining normal absorptances of open-cell foams based on opaque materials. Journal of Physics: Conference Series, 2016, 676, 012009.	0.4	1
53	CRITICAL MICRO-TEXTURAL DETAILS INFLUENCING RADIATIVE TRANSPORT IN HETEROGENEOUS MATERIALS. , 2019, , .		1
54	Far-and mid-infrared properties of carbon layers elaborated by plasma sputtering. Applied Surface Science, 2016, 390, 1002-1008.	6.1	0

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55	Iterative and FEM methods to solve the 2 <sup>D</sup> Radiative Transfer Equation with specular reflexion. Journal of Physics: Conference Series, 2016, 676, 012013.	0.4	0
56	Study of the reflective behaviour of carbon fibres reinforced polymer composite up to 450 <sup>°C</sup> . AIP Conference Proceedings, 2017, , .	0.4	0
57	Ample textures for electromagnetic scattering in radiative transfer. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 253, 107113.	2.3	0
58	SPATIAL VERSUS ANGULAR PARALLELIZATION FOR SOLUTION OF RADIATIVE TRANSFER EQUATION IN PARTICIPATING MEDIA. , 2017, , .		0
59	COMBINING MICRO- MESO- AND MACRO-SCOPIC NUMERICAL METHODS FOR MULTISCALE RADIATIVE TRANSFER MODELING OF SiC-BASED FOAMS UP TO VERY HIGH TEMPERATURES. , 2018, , .		0