

Ferenc Borondics

List of Publications by Year in descending order

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115
papers

3,672
citations

172207

29
h-index

138251

58
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119
all docs

119
docs citations

119
times ranked

6298
citing authors

#	ARTICLE	IF	CITATIONS
1	Bolometric Infrared Photoresponse of Suspended Single-Walled Carbon Nanotube Films. <i>Science</i> , 2006, 312, 413-416.	6.0	446
2	Experimental and theoretical investigation of the electronic structure of Cu ₂ O and CuO thin films on Cu(110) using x-ray photoelectron and absorption spectroscopy. <i>Journal of Chemical Physics</i> , 2013, 138, 024704.	1.2	219
3	Charge transfer and Fermi level shift in p-doped single-walled carbon nanotubes. <i>Physical Review B</i> , 2005, 71, .	1.1	205
4	Broadband electromagnetic response and ultrafast dynamics of few-layer epitaxial graphene. <i>Applied Physics Letters</i> , 2009, 94, .	1.5	199
5	Size-Dependent Dissociation of Carbon Monoxide on Cobalt Nanoparticles. <i>Journal of the American Chemical Society</i> , 2013, 135, 2273-2278.	6.6	195
6	Rotor-stator molecular crystals of fullerenes with cubane. <i>Nature Materials</i> , 2005, 4, 764-767.	13.3	113
7	Charge dynamics in transparent single-walled carbon nanotube films from optical transmission measurements. <i>Physical Review B</i> , 2006, 74, .	1.1	108
8	Thermal Conductivity Measurements of Semitransparent Single-Walled Carbon Nanotube Films by a Bolometric Technique. <i>Nano Letters</i> , 2007, 7, 900-904.	4.5	100
9	Comparing and Correlating Solubility Parameters Governing the Self-Assembly of Molecular Gels Using 1,3:2,4-Dibenzylidene Sorbitol as the Gelator. <i>Langmuir</i> , 2014, 30, 14128-14142.	1.6	100
10	Infrared Orange: Connecting Hyperspectral Data with Machine Learning. <i>Synchrotron Radiation News</i> , 2017, 30, 40-45.	0.2	99
11	In situ soft X-ray absorption spectroscopy investigation of electrochemical corrosion of copper in aqueous NaHCO ₃ solution. <i>Electrochemistry Communications</i> , 2010, 12, 820-822.	2.3	95
12	ATR-FTIR spectroscopy reveals involvement of lipids and proteins of intact pea pollen grains to heat stress tolerance. <i>Frontiers in Plant Science</i> , 2014, 5, 747.	1.7	91
13	Room-Temperature Reaction of Oxygen with Gold: An In situ Ambient-Pressure X-ray Photoelectron Spectroscopy Investigation. <i>Journal of the American Chemical Society</i> , 2010, 132, 2858-2859.	6.6	79
14	Dealloying of Cobalt from CuCo Nanoparticles under Syngas Exposure. <i>Journal of Physical Chemistry C</i> , 2013, 117, 6259-6266.	1.5	74
15	Pressure Induced Phase Transitions and Metallization of a Neutral Radical Conductor. <i>Journal of the American Chemical Society</i> , 2014, 136, 1070-1081.	6.6	72
16	Super-Resolution Infrared Imaging of Polymorphic Amyloid Aggregates Directly in Neurons. <i>Advanced Science</i> , 2020, 7, 1903004.	5.6	71
17	Supercontinuum-based Fourier transform infrared spectromicroscopy. <i>Optica</i> , 2018, 5, 378.	4.8	68
18	Charge State of Gold Nanoparticles Supported on Titania under Oxygen Pressure. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 2266-2269.	7.2	57

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19	Influence of chirality on the modes of self-assembly of 12-hydroxystearic acid in molecular gels of mineral oil. <i>Soft Matter</i> , 2011, 7, 7359.	1.2	55
20	Sb- and Bi-doped Mg ₂ Si: location of the dopants, micro- and nanostructures, electronic structures and thermoelectric properties. <i>Dalton Transactions</i> , 2014, 43, 14983-14991.	1.6	55
21	DIFFERENT ORIGINS OR DIFFERENT EVOLUTIONS? DECODING THE SPECTRAL DIVERSITY AMONG C-TYPE ASTEROIDS. <i>Astronomical Journal</i> , 2017, 153, 72.	1.9	55
22	Quasar: Easy Machine Learning for Biospectroscopy. <i>Cells</i> , 2021, 10, 2300.	1.8	51
23	Effect of microwave treatment on the cooking and macronutrient qualities of pulses. <i>International Journal of Food Properties</i> , 2017, 20, 409-422.	1.3	44
24	Hydrostaticity of pressure-transmitting media for high pressure infrared spectroscopy. <i>High Pressure Research</i> , 2019, 39, 608-618.	0.4	44
25	Large-Area, Freestanding, Single-Layer Graphene-Gold: A Hybrid Plasmonic Nanostructure. <i>ACS Nano</i> , 2014, 8, 6353-6362.	7.3	43
26	Dome C ultracarbonaceous Antarctic micrometeorites. <i>Astronomy and Astrophysics</i> , 2018, 609, A65.	2.1	38
27	Lysine-functionalized nanodiamonds: synthesis, physiochemical characterization, and nucleic acid binding studies. <i>International Journal of Nanomedicine</i> , 2012, 7, 3851.	3.3	37
28	Mesoporous Metal-Organic Framework MIL-101 at High Pressure. <i>Journal of the American Chemical Society</i> , 2020, 142, 15012-15019.	6.6	37
29	Subcellular Biochemical Investigation of Purkinje Neurons Using Synchrotron Radiation Fourier Transform Infrared Spectroscopic Imaging with a Focal Plane Array Detector. <i>ACS Chemical Neuroscience</i> , 2013, 4, 1071-1080.	1.7	35
30	Synchrotron based phase contrast X-ray imaging combined with FTIR spectroscopy reveals structural and biomolecular differences in spikelets play a significant role in resistance to <i>Fusarium</i> in wheat. <i>BMC Plant Biology</i> , 2015, 15, 24.	1.6	30
31	Correlative optical photothermal infrared and X-ray fluorescence for chemical imaging of trace elements and relevant molecular structures directly in neurons. <i>Light: Science and Applications</i> , 2021, 10, 151.	7.7	24
32	<i>Allium fistulosum</i> as a novel system to investigate mechanisms of freezing resistance. <i>Physiologia Plantarum</i> , 2013, 147, 101-111.	2.6	23
33	A reaction cell with sample laser heating for <i>in situ</i> soft X-ray absorption spectroscopy studies under environmental conditions. <i>Journal of Synchrotron Radiation</i> , 2013, 20, 504-508.	1.0	23
34	Origin of the insulating state in exfoliated high- T_c atomic crystals. <i>Physical Review B</i> , 2014, 90, .	1.1	23
35	Development of single-beam wide-field infrared imaging to study sub-cellular neuron biochemistry. <i>Vibrational Spectroscopy</i> , 2015, 77, 51-59.	1.2	23
36	Characterizing irradiated surfaces using IR spectroscopy. <i>Icarus</i> , 2020, 345, 113722.	1.1	22

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37	Reductive Functionalization of Carbon Nanotubes. Fullerenes Nanotubes and Carbon Nanostructures, 2005, 13, 375-382.	1.0	20
38	Nanometre-scale infrared chemical imaging of organic matter in ultra-carbonaceous Antarctic micrometeorites (UCAMMs). Astronomy and Astrophysics, 2019, 622, A160.	2.1	20
39	Polymeric sheets in Mg ₄ C ₆₀ . Solid State Communications, 2003, 127, 311-313.	0.9	19
40	Synchrotron based infrared imaging study of compositional changes in stored wheat due to infection with <i>Aspergillus glaucus</i> . Journal of Stored Products Research, 2011, 47, 372-377.	1.2	19
41	Photo and thermochemical evolution of astrophysical ice analogues as a source for soluble and insoluble organic materials in Solar system minor bodies. Monthly Notices of the Royal Astronomical Society, 2017, 464, 114-120.	1.6	19
42	Calculation of optical constants from carbon nanotube transmission spectra. Physica Status Solidi (B): Basic Research, 2006, 243, 3485-3488.	0.7	18
43	Nanoscale imaging of freestanding nitrogen doped single layer graphene. Nanoscale, 2015, 7, 2289-2294.	2.8	18
44	Organic and mineralogic heterogeneity of the Paris meteorite followed by $\langle \text{FTIR} \rangle$ hyperspectral imaging. Meteoritics and Planetary Science, 2018, 53, 2608-2623.	0.7	18
45	FTIR microspectroscopy revealed biochemical changes in liver and kidneys as a result of exposure to low dose of iron oxide nanoparticles. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2020, 236, 118355.	2.0	18
46	Micro to Nano: Multiscale IR Analyses Reveal Zinc Soap Heterogeneity in a 19th-Century Painting by Corot. Analytical Chemistry, 2022, 94, 3103-3110.	3.2	18
47	Novel optical photothermal infrared (O-PTIR) spectroscopy for the noninvasive characterization of heritage glass-metal objects. Science Advances, 2022, 8, eabl6769.	4.7	18
48	Nanoscale Analysis of Historical Paintings by Means of O-PTIR Spectroscopy: The Identification of the Organic Particles in <i>L'Arlequin</i> (Portrait of Madame Ginoux) by Van Gogh. Angewandte Chemie - International Edition, 2021, 60, 22753-22760.	7.2	17
49	Synchrotron Infrared Radiation for Electrochemical External Reflection Spectroscopy: A Case Study Using Ferrocyanide. Analytical Chemistry, 2011, 83, 3632-3639.	3.2	16
50	Step-Scan IR Spectroelectrochemistry with Ultramicroelectrodes: Nonsurface Enhanced Detection of Near Femtomole Quantities Using Synchrotron Radiation. Analytical Chemistry, 2013, 85, 8722-8727.	3.2	16
51	Optical Photothermal Infrared Microspectroscopy Discriminates for the First Time Different Types of Lung Cells on Histopathology Glass Slides. Analytical Chemistry, 2021, 93, 11081-11088.	3.2	16
52	Structure and properties of the stable two-dimensional conducting polymer $\langle \text{Mg} \rangle_5 \langle \text{C} \rangle_{60}$. Physical Review B, 2008, 77, .	1.1	15
53	Functionalization of Carbon Nanotubes via Dissolving Metal Reductions. Journal of Nanoscience and Nanotechnology, 2007, 7, 1551-1559.	0.9	14
54	Deep convolutional neural network recovers pure absorbance spectra from highly scattered distorted spectra of cells. Journal of Biophotonics, 2020, 13, e202000204.	1.1	14

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55	Nano-Infrared Imaging of Primary Neurons. <i>Cells</i> , 2021, 10, 2559.	1.8	14
56	Rotor-stator phases of fullerenes with cubane derivatives: A novel family of heteromolecular crystals. <i>Physica Status Solidi (B): Basic Research</i> , 2006, 243, 3032-3036.	0.7	13
57	Rotational Dynamics in C70: Temperature- and Pressure-Dependent Infrared Studies. <i>Journal of Physical Chemistry C</i> , 2011, 115, 3646-3653.	1.5	13
58	Vibrational Spectra of C ₆₀ -C ₈₀ H ₈ and C ₇₀ -C ₈₀ H ₈ in the Rotor-stator and Polymer Phases. <i>Journal of Physical Chemistry B</i> , 2007, 111, 12375-12382.	1.2	12
59	Wide-range optical spectra of carbon nanotubes: a comparative study. <i>Physica Status Solidi (B): Basic Research</i> , 2008, 245, 2229-2232.	0.7	12
60	Hyperspectral FTIR imaging of irradiated carbonaceous meteorites. <i>Planetary and Space Science</i> , 2018, 158, 38-45.	0.9	12
61	Space Weathering Affects the Remote Near-IR Identification of Phyllosilicates. <i>Planetary Science Journal</i> , 2020, 1, 61.	1.5	11
62	Surprisingly high sensitivity of copper nanoparticles toward coordinating ligands: consequences for the hydride reduction of benzaldehyde. <i>Catalysis Science and Technology</i> , 2018, 8, 5073-5080.	2.1	10
63	A Mineralogical Context for the Organic Matter in the Paris Meteorite Determined by A Multi-Technique Analysis. <i>Life</i> , 2019, 9, 44.	1.1	10
64	Device fabrication and transport measurements of FinFETs built with ²⁸ Si SOI wafers toward donor qubits in silicon. <i>Semiconductor Science and Technology</i> , 2009, 24, 105022.	1.0	9
65	The influence of high fat diets with different ketogenic ratios on the hippocampal accumulation of creatine – FTIR microspectroscopy study. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2017, 184, 13-22.	2.0	9
66	The fulleride polymer Mg ₅ C ₆₀ . <i>Physica Status Solidi (B): Basic Research</i> , 2007, 244, 3853-3856.	0.7	8
67	Interface for time-resolved electrochemical infrared microspectroscopy using synchrotron infrared radiation. <i>Review of Scientific Instruments</i> , 2011, 82, 083105.	0.6	8
68	Spatiotemporal Mapping of Diffusion Layers Using Synchrotron Infrared Radiation. <i>Electrochimica Acta</i> , 2015, 162, 72-78.	2.6	8
69	BiTeCl and BiTeBr: A comparative high-pressure optical study. <i>Physical Review B</i> , 2017, 95, .	1.1	8
70	IR-Mueller matrix ellipsometry of self-assembled nanopatterned gold grid polarizer. <i>Applied Surface Science</i> , 2017, 421, 728-737.	3.1	8
71	Combining IR and X-ray microtomography data sets: Application to Itokawa particles and to Paris meteorite. <i>Meteoritics and Planetary Science</i> , 2020, 55, 1645-1664.	0.7	8
72	Performance comparison of aperture-less and confocal infrared microscopes. <i>Journal of Spectral Imaging</i> , 0, .	0.0	8

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73	FTIR Micro-tomography of Five Itokawa Particles and one Primitive Carbonaceous Chondrite. <i>Microscopy and Microanalysis</i> , 2018, 24, 2100-2101.	0.2	7
74	A preparation sequence for multi- μm -sized extraterrestrial and geological samples. <i>Meteoritics and Planetary Science</i> , 2021, 56, 1151-1172.	0.7	7
75	NORTHWEST AFRICA (NWA) 12563 and ungrouped C2 chondrites: Alteration styles and relationships to asteroids. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 311, 238-273.	1.6	7
76	Metal-catalyst-free gas-phase synthesis of long-chain hydrocarbons. <i>Nature Communications</i> , 2021, 12, 5937.	5.8	7
77	Quantitative analysis of electrochemical diffusion layers using synchrotron infrared radiation. <i>Journal of Electroanalytical Chemistry</i> , 2017, 800, 184-189.	1.9	6
78	A new typology of human hair medullas based on lipid composition analysis by synchrotron FTIR microspectroscopy. <i>Analyst, The</i> , 2021, 146, 3942-3954.	1.7	6
79	Correlative imaging to resolve molecular structures in individual cells: Substrate validation study for super-resolution infrared microspectroscopy. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2022, 43, 102563.	1.7	6
80	Insights into Biochemical Alteration in Cancer-Associated Fibroblasts by using Novel Correlative Spectroscopy. <i>ChemistryOpen</i> , 2017, 6, 149-157.	0.9	5
81	Probing intraband excitations in ZrTe_5 : A high-pressure infrared and transport study. <i>Physical Review B</i> , 2020, 101, .		
82	Vitamin D and Calcium Supplementation Accelerate Vascular Calcification in a Model of Pseudoxanthoma Elasticum. <i>International Journal of Molecular Sciences</i> , 2022, 23, 2302.	1.8	5
83	Enhanced Stability of the Metal-Organic Framework MIL-101(Cr) by Embedding Pd Nanoparticles for Densification through Compression. <i>ACS Applied Nano Materials</i> , 2022, 5, 4196-4203.	2.4	5
84	Multiscale correlated analysis of the Aguas Zarcas CM chondrite. <i>Meteoritics and Planetary Science</i> , 2022, 57, 965-988.	0.7	4
85	Infrared spectroscopy on the fullerene C_{70} under pressure. <i>Physica Status Solidi (B): Basic Research</i> , 2008, 245, 2006-2009.	0.7	3
86	Dependence of liquid crystal morphology on phospholipid hydrocarbon length. <i>Colloids and Surfaces B: Biointerfaces</i> , 2011, 87, 116-121.	2.5	3
87	Cloaking by π -electrons in the infrared. <i>Physica Status Solidi (B): Basic Research</i> , 2016, 253, 2457-2460.	0.7	3
88	An automated approach for fringe frequency estimation and removal in infrared spectroscopy and hyperspectral imaging of biological samples. <i>Journal of Biophotonics</i> , 2021, 14, e202100148.	1.1	3
89	Geometry induced bias in the remote near-IR identification of phyllosilicates on space weathered bodies. <i>Icarus</i> , 2022, 376, 114887.	1.1	3
90	Infrared spectra of C_{70} and its alkali salts. <i>Ferroelectrics</i> , 2001, 249, 117-124.	0.3	2

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91	Distortions of C[sub 60][sup 4~] studied by infrared spectroscopy. AIP Conference Proceedings, 2003, ,	0.3	2
92	Investigation of hydrogenated HiPCo nanotubes by infrared spectroscopy. Physica Status Solidi (B): Basic Research, 2010, 247, 2855-2858.	0.7	2
93	Reconciling FTIR Spectroscopy with Top-off Operations at the Advanced Light Source. , 2010, , .		2
94	Spider silk protein structure analysis by FTIR and STXM spectromicroscopy techniques. Canadian Young Scientist Journal, 2014, 2014, 35-42.	0.0	2
95	Breakdown of diameter selectivity in a reductive hydrogenation reaction of single-walled carbon nanotubes. Chemical Physics Letters, 2015, 618, 214-218.	1.2	2
96	Nanoscale analysis of historical paintings by means of FTIR spectroscopy: The identification of the organic particles in L'Arlesienne (portrait of Madame Ginoux) by Van Gogh. Angewandte Chemie, 2021, 133, 22935.	1.6	2
97	Using Synchrotron FTIR and Confocal Cryomicroscopy to Explore Mechanisms of Cold Acclimation and Freezing Resistance Using a Single Cell Layer of Allium fistulosum L. , 2013, , 165-177.		2
98	Direct Visualization of Ultrastrong Coupling between Luttinger-Liquid Plasmons and Phonon Polaritons. Nano Letters, 2022, 22, 3495-3502.	4.5	2
99	Theoretical investigation of azafullerenes. AIP Conference Proceedings, 2001, , .	0.3	1
100	Wide Range Optical Studies on Transparent SWNT Films. AIP Conference Proceedings, 2004, , .	0.3	1
101	Ultrafast terahertz studies of dirac fermion dynamics in graphene. , 2009, , .		1
102	Determination of optical constants from Martian analog materials using a spectro-polarimetric technique. Planetary and Space Science, 2021, 195, 105138.	0.9	1
103	Polyaromatic Units Set the Albedo of Dark Extraterrestrial Materials. Planetary Science Journal, 2022, 3, 10.	1.5	1
104	Jahn-Teller distortion in Cs4C60 studied by vibrational spectroscopy. AIP Conference Proceedings, 2002, , .	0.3	0
105	Mg4C60: A New Two-dimensional Fulleride Polymer. AIP Conference Proceedings, 2003, , .	0.3	0
106	Ultrafast THz Studies of Few-Layer Epitaxial Graphene. , 2009, , .		0
107	Ultrafast Terahertz Dynamics and Broadband Optical Conductivity of Few-Layer Epitaxial Graphene. , 2010, , .		0
108	Mid-Infrared Spectromicroscopy with a Supercontinuum Laser Source. , 2016, , .		0

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109	Ultrafast fiber lasers at 2 μ m and applications. , 2018, , .		0
110	Ion irradiation of astrophysically relevant frozen mixtures with INGMAR-T. Proceedings of the International Astronomical Union, 2019, 15, 399-401.	0.0	0
111	Innentitelbild: Nanoscale Analysis of Historical Paintings by Means of Oâ€PTIR Spectroscopy: The Identification of the Organic Particles in <i>Lâ€2ArLÃ©sienne (Portrait of Madame Ginoux)</i> by Van Gogh (Angew. Chem. 42/2021). Angewandte Chemie, 2021, 133, 22770-22770.	1.6	0
112	Ultrafast THz Response of Few-Layer Epitaxial Graphene. , 2010, , .		0
113	Synchrotron Radiation for in-situ FTIR Spectroelectrochemistry. ECS Meeting Abstracts, 2011, , .	0.0	0
114	FTIR Imaging and Spectroscopy with Six Decades Spatial Dynamic Range. , 2016, , .		0
115	CARBON NANOTUBE FILMS FOR OPTICAL ABSORPTION. , 2006, , 169-170.		0