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 g-index
119 all docs	119 docs citations	119 times ranked	6298 citing authors

#	Article	IF	Citations
1	Polyaromatic Units Set the Albedo of Dark Extraterrestrial Materials. Planetary Science Journal, 2022, 3, 10.	1.5	1
2	Geometry induced bias in the remote near-IR identification of phyllosilicates on space weathered bodies. Icarus, 2022, 376, 114887.	1.1	3
3	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
4	Vitamin D and Calcium Supplementation Accelerate Vascular Calcification in a Model of Pseudoxanthoma Elasticum. International Journal of Molecular Sciences, 2022, 23, 2302.	1.8	5
5	Novel optical photothermal infrared (O-PTIR) spectroscopy for the noninvasive characterization of heritage glass-metal objects. Science Advances, 2022, 8, eabl6769.	4.7	18
6	Direct Visualization of Ultrastrong Coupling between Luttinger-Liquid Plasmons and Phonon Polaritons. Nano Letters, 2022, 22, 3495-3502.	4.5	2
7	Multiscale correlated analysis of the Aguas Zarcas CM chondrite. Meteoritics and Planetary Science, 2022, 57, 965-988.	0.7	4
8	Enhanced Stability of the Metalâ€“Organic Framework MIL-101(Cr) by Embedding Pd Nanoparticles for Densification through Compression. ACS Applied Nano Materials, 2022, 5, 4196-4203.	2.4	5
9	Correlative imaging to resolve molecular structures in individual cells: Substrate validation study for super-resolution infrared microspectroscopy. Nanomedicine: Nanotechnology, Biology, and Medicine, 2022, 43, 102563.	1.7	6
10	Determination of optical constants from Martian analog materials using a spectro-polarimetric technique. Planetary and Space Science, 2021, 195, 105138.	0.9	1
11	A new typology of human hair medullas based on lipid composition analysis by synchrotron FTIR microspectroscopy. Analyst, The, 2021, 146, 3942-3954.	1.7	6
12	A preparation sequence for multiâ€analysis of Âµmâ€sized extraterrestrial and geological samples. Meteoritics and Planetary Science, 2021, 56, 1151-1172.	0.7	7
13	Correlative optical photothermal infrared and X-ray fluorescence for chemical imaging of trace elements and relevant molecular structures directly in neurons. Light: Science and Applications, 2021, 10, 151.	7.7	24
14	Innentitelbild: Nanoscale Analysis of Historical Paintings by Means of Oâ€PTIR Spectroscopy: The Identification of the Organic Particles in Lâ€²ArlÃ©sienne (Portrait of Madame Ginoux) by Van Gogh (Angew. Chem. 42/2021). Angewandte Chemie, 2021, 133, 22770-22770.	1.6	0
15	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
16	Nano-Infrared Imaging of Primary Neurons. Cells, 2021, 10, 2559.	1.8	14
17	Nanoscale Analysis of Historical Paintings by Means of Oâ€PTIR Spectroscopy: The Identification of the Organic Particles in Lâ€²ArlÃ©sienne (Portrait of Madame Ginoux) by Van Gogh. Angewandte Chemie - International Edition, 2021, 60, 22753-22760.	7.2	17
18	An automated approach for fringe frequency estimation and removal in infrared spectroscopy and hyperspectral imaging of biological samples. Journal of Biophotonics, 2021, 14, e202100148.	1.1	3

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19	Quasar: Easy Machine Learning for Biospectroscopy. Cells, 2021, 10, 2300.	1.8	51
20	Nanoscale analysis of historical paintings by means of Oâ€PTIR spectroscopy: The identification of the organic particles in Lâ€²ArlÃ©sienne (portrait of Madame Ginoux) by Van Gogh. Angewandte Chemie, 2021, 133, 22935.	1.6	2
21	NORTHWEST AFRICA (NWA) 12563 and ungrouped C2 chondrites: Alteration styles and relationships to asteroids. Geochimica Et Cosmochimica Acta, 2021, 311, 238-273.	1.6	7
22	Metal-catalyst-free gas-phase synthesis of long-chain hydrocarbons. Nature Communications, 2021, 12, 5937.	5.8	7
23	Mesoporous Metalâ€“Organic Framework MIL-101 at High Pressure. Journal of the American Chemical Society, 2020, 142, 15012-15019.	6.6	37
24	Deep convolutional neural network recovers pure absorbance spectra from highly scatterâ€distorted spectra of cells. Journal of Biophotonics, 2020, 13, e202000204.	1.1	14
25	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
26	Probing intraband excitations in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>ZrTe</mml:mi><mml:mn>5</mml:mn></mml:msub></mml:math> : A high-pressure infrared and transport study. Physical Review B, 2020, 101, .	1.1	5
27	Combining IR and Xâ€ray microtomography data sets: Application to Itokawa particles and to Paris meteorite. Meteoritics and Planetary Science, 2020, 55, 1645-1664.	0.7	8
28	Superâ€Resolution Infrared Imaging of Polymorphic Amyloid Aggregates Directly in Neurons. Advanced Science, 2020, 7, 1903004.	5.6	71
29	Characterizing irradiated surfaces using IR spectroscopy. Icarus, 2020, 345, 113722.	1.1	22
30	Space Weathering Affects the Remote Near-IR Identification of Phyllosilicates. Planetary Science Journal, 2020, 1, 61.	1.5	11
31	Hydrostaticity of pressure-transmitting media for high pressure infrared spectroscopy. High Pressure Research, 2019, 39, 608-618.	0.4	44
32	A Mineralogical Context for the Organic Matter in the Paris Meteorite Determined by A Multi-Technique Analysis. Life, 2019, 9, 44.	1.1	10
33	Nanometre-scale infrared chemical imaging of organic matter in ultra-carbonaceous Antarctic micrometeorites (UCAMMs). Astronomy and Astrophysics, 2019, 622, A160.	2.1	20
34	Ion irradiation of astrophysically relevant frozen mixtures with INGMAR-T. Proceedings of the International Astronomical Union, 2019, 15, 399-401.	0.0	0
35	Dome C ultracarbonaceous Antarctic micrometeorites. Astronomy and Astrophysics, 2018, 609, A65.	2.1	38
36	Surprisingly high sensitivity of copper nanoparticles toward coordinating ligands: consequences for the hydride reduction of benzaldehyde. Catalysis Science and Technology, 2018, 8, 5073-5080.	2.1	10

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37	Supercontinuum-based Fourier transform infrared spectromicroscopy. Optica, 2018, 5, 378.	4.8	68
38	FTIR Micro-tomography of Five Itokawa Particles and one Primitive Carbonaceous Chondrite. Microscopy and Microanalysis, 2018, 24, 2100-2101.	0.2	7
39	Organic and mineralogic heterogeneity of the Paris meteorite followed by <scp>FTIR</scp> hyperspectral imaging. Meteoritics and Planetary Science, 2018, 53, 2608-2623.	0.7	18
40	Hyperspectral FTIR imaging of irradiated carbonaceous meteorites. Planetary and Space Science, 2018, 158, 38-45.	0.9	12
41	Ultrafast fiber lasers at 2 Î¼m and applications. , 2018, , .		0
42	Effect of microwave treatment on the cooking and macronutrient qualities of pulses. International Journal of Food Properties, 2017, 20, 409-422.	1.3	44
43	DIFFERENT ORIGINS OR DIFFERENT EVOLUTIONS? DECODING THE SPECTRAL DIVERSITY AMONG C-TYPE ASTEROIDS. Astronomical Journal, 2017, 153, 72.	1.9	55
44	Quantitative analysis of electrochemical diffusion layers using synchrotron infrared radiation. Journal of Electroanalytical Chemistry, 2017, 800, 184-189.	1.9	6
45	BiTeCl and BiTeBr: A comparative high-pressure optical study. Physical Review B, 2017, 95, .	1.1	8
46	Insights into Biochemical Alteration in Cancer-Associated Fibroblasts by using Novel Correlative Spectroscopy. ChemistryOpen, 2017, 6, 149-157.	0.9	5
47	The influence of high fat diets with different ketogenic ratios on the hippocampal accumulation of creatine â€“ FTIR microspectroscopy study. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2017, 184, 13-22.	2.0	9
48	IR-Mueller matrix ellipsometry of self-assembled nanopatterned gold grid polarizer. Applied Surface Science, 2017, 421, 728-737.	3.1	8
49	Infrared Orange: Connecting Hyperspectral Data with Machine Learning. Synchrotron Radiation News, 2017, 30, 40-45.	0.2	99
50	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
51	Mid-Infrared Spectromicroscopy with a Supercontinuum Laser Source. , 2016, , .		0
52	Cloaking by Ï€-electrons in the infrared. Physica Status Solidi (B): Basic Research, 2016, 253, 2457-2460.	0.7	3
53	FTIR Imaging and Spectroscopy with Six Decades Spatial Dynamic Range. , 2016, , .		0
54	Nanoscale imaging of freestanding nitrogen doped single layer graphene. Nanoscale, 2015, 7, 2289-2294.	2.8	18

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55	Breakdown of diameter selectivity in a reductive hydrogenation reaction of single-walled carbon nanotubes. Chemical Physics Letters, 2015, 618, 214-218.	1.2	2
56	Spatiotemporal Mapping of Diffusion Layers Using Synchrotron Infrared Radiation. Electrochimica Acta, 2015, 162, 72-78.	2.6	8
57	Development of single-beam wide-field infrared imaging to study sub-cellular neuron biochemistry. Vibrational Spectroscopy, 2015, 77, 51-59.	1.2	23
58	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 Fusarium in wheat. BMC Plant Biology, 2015, 15, 24.	1.6	30
59	ATRÃ¢â‚¬â€œFTIR spectroscopy reveals involvement of lipids and proteins of intact pea pollen grains to heat stress tolerance. Frontiers in Plant Science, 2014, 5, 747.	1.7	91
60	Spider silk protein structure analysis by FTIR and STXM spectromicroscopy techniques. Canadian Young Scientist Journal, 2014, 2014, 35-42.	0.0	2
61	Comparing and Correlating Solubility Parameters Governing the Self-Assembly of Molecular Gels Using 1,3:2,4-Dibenzylidene Sorbitol as the Gelator. Langmuir, 2014, 30, 14128-14142.	1.6	100
62	Sb- and Bi-doped Mg₂Si: location of the dopants, micro- and nanostructures, electronic structures and thermoelectric properties. Dalton Transactions, 2014, 43, 14983-14991.	1.6	55
63	Origin of the insulating state in exfoliated<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mtext>high-</mml:mtext><mml:msub><mml:mi>T</mml:mi><mml:mi> atomic crystals. Physical Review B, 2014, 90, .	1.1	23
64	Pressure Induced Phase Transitions and Metallization of a Neutral Radical Conductor. Journal of the American Chemical Society, 2014, 136, 1070-1081.	6.6	72
65	Large-Area, Freestanding, Single-Layer Grapheneâ€“Gold: A Hybrid Plasmonic Nanostructure. ACS Nano, 2014, 8, 6353-6362.	7.3	43
66	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
67	Size-Dependent Dissociation of Carbon Monoxide on Cobalt Nanoparticles. Journal of the American Chemical Society, 2013, 135, 2273-2278.	6.6	195
68	Allium fistulosum as a novel system to investigate mechanisms of freezing resistance. Physiologia Plantarum, 2013, 147, 101-111.	2.6	23
69	Dealloying of Cobalt from CuCo Nanoparticles under Syngas Exposure. Journal of Physical Chemistry C, 2013, 117, 6259-6266.	1.5	74
70	Subcellular Biochemical Investigation of Purkinje Neurons Using Synchrotron Radiation Fourier Transform Infrared Spectroscopic Imaging with a Focal Plane Array Detector. ACS Chemical Neuroscience, 2013, 4, 1071-1080.	1.7	35
71	A reaction cell with sample laser heating forin situsoft X-ray absorption spectroscopy studies under environmental conditions. Journal of Synchrotron Radiation, 2013, 20, 504-508.	1.0	23
72	Experimental and theoretical investigation of the electronic structure of Cu2O and CuO thin films on Cu(110) using x-ray photoelectron and absorption spectroscopy. Journal of Chemical Physics, 2013, 138, 024704.	1.2	219

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73	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
74	Lysine-functionalized nanodiamonds: synthesis, physiochemical characterization, and nucleic acid binding studies. International Journal of Nanomedicine, 2012, 7, 3851.	3.3	37
75	Rotational Dynamics in C70: Temperature- and Pressure-Dependent Infrared Studies. Journal of Physical Chemistry C, 2011, 115, 3646-3653.	1.5	13
76	Synchrotron Infrared Radiation for Electrochemical External Reflection Spectroscopy: A Case Study Using Ferrocyanide. Analytical Chemistry, 2011, 83, 3632-3639.	3.2	16
77	Influence of chirality on the modes of self-assembly of 12-hydroxystearic acid in molecular gels of mineral oil. Soft Matter, 2011, 7, 7359.	1.2	55
78	Synchrotron based infrared imaging study of compositional changes in stored wheat due to infection with Aspergillus glaucus. Journal of Stored Products Research, 2011, 47, 372-377.	1.2	19
79	Charge State of Gold Nanoparticles Supported on Titania under Oxygen Pressure. Angewandte Chemie - International Edition, 2011, 50, 2266-2269.	7.2	57
80	Dependence of liquid crystal morphology on phospholipid hydrocarbon length. Colloids and Surfaces B: Biointerfaces, 2011, 87, 116-121.	2.5	3
81	Interface for time-resolved electrochemical infrared microspectroscopy using synchrotron infrared radiation. Review of Scientific Instruments, 2011, 82, 083105.	0.6	8
82	Synchrotron Radiation for in-situ FTIR Spectroelectrochemistry. ECS Meeting Abstracts, 2011, , .	0.0	0
83	In situ soft X-ray absorption spectroscopy investigation of electrochemical corrosion of copper in aqueous NaHCO3 solution. Electrochemistry Communications, 2010, 12, 820-822.	2.3	95
84	Investigation of hydrogenated HiPCo nanotubes by infrared spectroscopy. Physica Status Solidi (B): Basic Research, 2010, 247, 2855-2858.	0.7	2
85	Reconciling FTIR Spectroscopy with Top-off Operations at the Advanced Light Source. , 2010, , .		2
86	Ultrafast Terahertz Dynamics and Broadband Optical Conductivity of Few-Layer Epitaxial Graphene. , 2010, , .		0
87	Room-Temperature Reaction of Oxygen with Gold: An In situ Ambient-Pressure X-ray Photoelectron Spectroscopy Investigation. Journal of the American Chemical Society, 2010, 132, 2858-2859.	6.6	79
88	Ultrafast THz Response of Few-Layer Epitaxial Graphene. , 2010, , .		0
89	Device fabrication and transport measurements of FinFETs built with²⁸Si SOI wafers toward donor qubits in silicon. Semiconductor Science and Technology, 2009, 24, 105022.	1.0	9
90	Ultrafast THz Studies of Few-Layer Epitaxial Graphene. , 2009, , .		0

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91	Broadband electromagnetic response and ultrafast dynamics of few-layer epitaxial graphene. Applied Physics Letters, 2009, 94, .	1.5	199
92	Ultrafast terahertz studies of dirac fermion dynamics in graphene. , 2009, , .		1
93	Infrared spectroscopy on the fullerene C₇₀ under pressure. Physica Status Solidi (B): Basic Research, 2008, 245, 2006-2009.	0.7	3
94	Wideâ€range optical spectra of carbon nanotubes: a comparative study. Physica Status Solidi (B): Basic Research, 2008, 245, 2229-2232.	0.7	12
95	Structure and properties of the stable two-dimensional conducting polymer<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi mathvariant="normal">Mg</mml:mi><mml:mn>5</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">C</mml:mi><mml:mn>60</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2008, 77, .	1.1	15
96	Functionalization of Carbon Nanotubes via Dissolving Metal Reductions. Journal of Nanoscience and Nanotechnology, 2007, 7, 1551-1559.	0.9	14
97	Vibrational Spectra of C₆₀Â·C₈H₈ and C₇₀Â·C₈H₈ in the Rotor-stator and Polymer Phases. Journal of Physical Chemistry B, 2007, 111, 12375-12382.	1.2	12
98	Thermal Conductivity Measurements of Semitransparent Single-Walled Carbon Nanotube Films by a Bolometric Technique. Nano Letters, 2007, 7, 900-904.	4.5	100
99	The fulleride polymer Mg5C60. Physica Status Solidi (B): Basic Research, 2007, 244, 3853-3856.	0.7	8
100	Charge dynamics in transparent single-walled carbon nanotube films from optical transmission measurements. Physical Review B, 2006, 74, .	1.1	108
101	Bolometric Infrared Photoresponse of Suspended Single-Walled Carbon Nanotube Films. Science, 2006, 312, 413-416.	6.0	446
102	Rotorâ€“stator phases of fullerenes with cubane derivatives: A novel family of heteromolecular crystals. Physica Status Solidi (B): Basic Research, 2006, 243, 3032-3036.	0.7	13
103	Calculation of optical constants from carbon nanotube transmission spectra. Physica Status Solidi (B): Basic Research, 2006, 243, 3485-3488.	0.7	18
104	CARBON NANOTUBE FILMS FOR OPTICAL ABSORPTION. , 2006, , 169-170.		0
105	Rotorâ€“stator molecular crystals of fullerenes with cubane. Nature Materials, 2005, 4, 764-767.	13.3	113
106	Reductive Functionalization of Carbon Nanotubes. Fullerenes Nanotubes and Carbon Nanostructures, 2005, 13, 375-382.	1.0	20
107	Charge transfer and Fermi level shift inp-doped single-walled carbon nanotubes. Physical Review B, 2005, 71, .	1.1	205
108	Wide Range Optical Studies on Transparent SWNT Films. AIP Conference Proceedings, 2004, , .	0.3	1

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109	Polymeric sheets in Mg4C60. Solid State Communications, 2003, 127, 311-313.	0.9	19
110	Distortions of C[sub 60][sup 4â^'] studied by infrared spectroscopy. AIP Conference Proceedings, 2003, , .	0.3	2
111	Mg4C60: A New Two-dimensional Fulleride Polymer. AIP Conference Proceedings, 2003, , .	0.3	0
112	Jahn-Teller distortion in Cs4C60 studied by vibrational spectroscopy. AIP Conference Proceedings, 2002, , .	0.3	0
113	Infrared spectra of C70 and its alkali salts. Ferroelectrics, 2001, 249, 117-124.	0.3	2
114	Theoretical investigation of azafullerenes. AIP Conference Proceedings, 2001, , .	0.3	1
115	Performance comparison of aperture-less and confocal infrared microscopes. Journal of Spectral Imaging, 0, , .	0.0	8