Pdâ€dr Thomas G MayerhÃ¶fer

List of Publications by Year
in descending order

82 papers	3,875 citations	279701 23 h-index	128225 60 g-index
84 all docs	84 docs citations	84 times ranked	4515 citing authors

#	Article	IF	Citations
1	Present and Future of Surface-Enhanced Raman Scattering. ACS Nano, 2020, 14, 28-117.	7.3	2,153
2	The Bouguerâ€Beerâ€Lambert Law: Shining Light on the Obscure. ChemPhysChem, 2020, 21, 2029-2046.	1.0	190
3	Plasmonic nanostructures for surface enhanced spectroscopic methods. Analyst, The, 2016, 141, 756-793.	1.7	159
4	Employing Theories Far beyond Their Limitsâ€"The Case of the (Boguerâ€) Beerâ€"Lambert Law. ChemPhysChem, 2016, 17, 1948-1955.	1.0	142
5	Periodic array-based substrates for surface-enhanced infrared spectroscopy. Nanophotonics, 2018, 7, 39-79.	2.9	59
6	Beer's Law â€" Why Absorbance Depends (Almost) Linearly on Concentration. ChemPhysChem, 2019, 20, 511-515.	1.0	58
7	Beer's Lawâ€Why Integrated Absorbance Depends Linearly on Concentration. ChemPhysChem, 2019, 20, 2748-2753.	1.0	54
8	Consolidated silica glass from nanoparticles. Journal of Solid State Chemistry, 2008, 181, 2442-2447.	1.4	47
9	Beer's law derived from electromagnetic theory. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2019, 215, 345-347.	2.0	42
10	The electric field standing wave effect in infrared transflection spectroscopy. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2018, 191, 283-289.	2.0	41
11	New Method of Modeling Infrared Spectra of Non-Cubic Single-Phase Polycrystalline Materials with Random Orientation. Applied Spectroscopy, 2002, 56, 1194-1205.	1.2	34
12	Ultra Sensing by Combining Extraordinary Optical Transmission with Perfect Absorption. ACS Photonics, 2015, 2, 1567-1575.	3.2	32
13	Beyond Beer's Law: Why the Index of Refraction Depends (Almost) Linearly on Concentration. ChemPhysChem, 2020, 21, 707-711.	1.0	31
14	The Electric Field Standing Wave Effect in Infrared Transmission Spectroscopy. ChemPhysChem, 2017, 18, 2916-2923.	1.0	30
15	Slit-Enhanced Chiral- and Broadband Infrared Ultra-Sensing. ACS Photonics, 2018, 5, 3238-3245.	3.2	30
16	Removing interference-based effects from the infrared transflectance spectra of thin films on metallic substrates: a fast and wave optics conform solution. Analyst, The, 2018, 143, 3164-3175.	1.7	30
17	Modelling IR-spectra of single-phase polycrystalline materials with random orientationâ€"a unified approach. Vibrational Spectroscopy, 2004, 35, 67-76.	1.2	29
18	Modelling IR spectra of polycrystalline materials in the large crystallites limitâ€"quantitative determination of orientation. Journal of Optics, 2006, 8, 657-671.	1.5	28

#	ARTICLE	IF	CITATIONS
19	Polarized IR reflectance spectra of the monoclinic single crystal K2Ni(SO4)2Â·6H2O: Dispersion analysis, dielectric and optical properties. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2008, 69, 629-641.	2.0	27
20	Determination of the dielectric tensor function of triclinic CuSO4Â·5H2O. Vibrational Spectroscopy, 2013, 67, 44-54.	1.2	26
21	Observation of Giant Infrared Circular Dichroism in Plasmonic 2D-Metamaterial Arrays. ACS Photonics, 2018, 5, 1176-1180.	3.2	26
22	Beyond Beer's Law: Revisiting the Lorentzâ€Lorenz Equation. ChemPhysChem, 2020, 21, 1218-1223.	1.0	26
23	Deviations from Beer's law on the microscale â€“ nonadditivity of absorption cross sections. Physical Chemistry Chemical Physics, 2019, 21, 9793-9801.	1.3	25
24	Quantitative Evaluation of Infrared Absorbance Spectra â€“ Lorentz Profile versus Lorentz Oscillator. ChemPhysChem, 2019, 20, 31-36.	1.0	25
25	Deep learning for â€˜artefactâ€™ removal in infrared spectroscopy. Analyst, The, 2020, 145, 5213-5220.	1.7	24
26	Removing interference-based effects from infrared spectra â€“ interference fringes re-revisited. Analyst, The, 2020, 145, 3385-3394.	1.7	23
27	Optical isotropy in polycrystallineBa2TiSi2O8: Testing the limits of a well established concept. Physical Review B, 2005, 71, .	1.1	22
28	CaF₂: An Ideal Substrate Material for Infrared Spectroscopy?. Analytical Chemistry, 2020, 92, 9024-9031.	3.2	21
29	Dispersion analysis of non-normal reflection spectra from monoclinic crystals. Vibrational Spectroscopy, 2012, 63, 396-403.	1.2	20
30	Investigation of the peculiarities in the polarized reflectance spectra of some Tutton salt monoclinic single crystals using dispersion analysis. Vibrational Spectroscopy, 2007, 44, 369-374.	1.2	19
31	Dispersion analysis of polarized IR reflectance spectra of Tutton salts: The Î½3(SO42âˆ’) frequency region. Vibrational Spectroscopy, 2008, 47, 91-98.	1.2	19
32	Beyond Beer's Law: Spectral Mixing Rules. Applied Spectroscopy, 2020, 74, 1287-1294.	1.2	19
33	Interpretation and modeling of IR-reflectance spectra of glasses considering medium range order. Journal of Non-Crystalline Solids, 2004, 333, 172-181.	1.5	18
34	Employing spectra of polycrystalline materials for the verification of optical constants obtained from corresponding low-symmetry single crystals. Applied Optics, 2007, 46, 327.	2.1	18
35	Dispersion analysis of triclinic K2Cr2O7. Vibrational Spectroscopy, 2014, 72, 111-118.	1.2	18
36	Beyond Beerâ€™s Law: Quasi-Ideal Binary Liquid Mixtures. Applied Spectroscopy, 2022, 76, 92-104.	1.2	17

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37	Symmetric Euler orientation representations for orientational averaging. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2005, 61, 2611-2621.	2.0	16
38	Recent technological and scientific developments concerning the use of infrared spectroscopy for point-of-care applications. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2021, 251, 119411.	2.0	16
39	Infrared refraction spectroscopy - Kramers-Kronig analysis revisited. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2022, 270, 120799.	2.0	15
40	Interference-Enhanced Raman Spectroscopy as a Promising Tool for the Detection of Biomolecules on Raman-Compatible Surfaces. Analytical Chemistry, 2018, 90, 9025-9032.	3.2	14
41	Modelling IR-spectra of single-phase polycrystalline materials with random orientation â€" Supplementations and refinements for optically uniaxial crystallites. Optik, 2003, 114, 351-359.	1.4	13
42	Effects of small crystallite size on the thermal infrared (vibrational) spectra of minerals. American Mineralogist, 2020, 105, 1756-1760.	0.9	13
43	Structures for surface-enhanced nonplasmonic or hybrid spectroscopy. Nanophotonics, 2020, 9, 741-760.	2.9	13
44	Dispersion analysis of perpendicular modes in anisotropic crystals and layers. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2011, 28, 2428.	0.8	12
45	Simplified formulas for non-normal reflection from monoclinic crystals. Optics Communications, 2011, 284, 719-723.	1.0	12
46	Electric field standing wave effects in internal reflection and ATR spectroscopy. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2018, 191, 165-171.	2.0	11
47	The Bouguerâ€Beerâ€Lambert Law: Shining Light on the Obscure. ChemPhysChem, 2020, 21, 2028-2028.	1.0	11
48	Improving Poor Man's Kramers-Kronig analysis and Kramers-Kronig constrained variational analysis. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2019, 213, 391-396.	2.0	10
49	The Negative Solvatochromism of Reichardtâ€˜s Dye B30 â€" A Complementary Study. ChemPhysChem, 2022, 23, .	1.0	10
50	Dispersion analysis with inverse dielectric function modelling. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2016, 168, 212-217.	2.0	9
51	Employing Theories Far beyond Their Limits â€" Linear Dichroism Theory. ChemPhysChem, 2018, 19, 2123-2130.	1.0	8
52	Complete dispersion analysis of single crystal neodymium gallate. Vibrational Spectroscopy, 2015, 78, 17-22.	1.2	7
53	Dispersion analysis of arbitrarily cut uniaxial crystals. Vibrational Spectroscopy, 2015, 78, 23-33.	1.2	7
54	Dispersion analysis of arbitrarily cut orthorhombic crystals. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2017, 180, 67-78.	2.0	7

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55	Generalized dispersion analysis of crystals with unknown symmetry and orientation. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2018, 205, 348-363.	2.0	7
56	Polarization-dependent vibrational shifts on dielectric substrates. Physical Chemistry Chemical Physics, 2020, 22, 17129-17133.	1.3	6
57	Infrared Refraction Spectroscopy. Applied Spectroscopy, 2021, 75, 1526-1531.	1.2	6
58	Angular dependence of the specular reflectance from an isotropic polydomain medium with large domains: surprising results regarding Brewsterâ€™s angle. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2005, 22, 185.	0.8	5
59	Angular dependence of the reflectance from an isotropic polydomain medium: experimental verification. Journal of Optics, 2007, 9, 581-585.	1.5	5
60	Employing polyethylene as contacting agent between ATR-crystals and solid samples with hard surfaces. Journal of Molecular Structure, 2009, 924-926, 571-576.	1.8	5
61	Generalized dispersion analysis of arbitrarily cut monoclinic crystals. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2017, 185, 217-227.	2.0	5
62	Angular dependence of the reflectance from an isotropic polydomain medium: the influence of absorption. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2005, 22, 2557.	0.8	4
63	Optical phonon features of triclinic montebrasite: Dispersion analysis and non-polar Raman modes. Vibrational Spectroscopy, 2015, 77, 25-34.	1.2	4
64	Dielectric function decomposition by dipole interaction distribution: application to triclinic K₂Cr₂O₇. New Journal of Physics, 2020, 22, 073041.	1.2	4
65	Hybrid 2D Correlation-Based Loss Function for the Correction of Systematic Errors. Analytical Chemistry, 2022, 94, 695-703.	3.2	4
66	Effective optical constants: A fundamental discrepancy. Vibrational Spectroscopy, 2006, 42, 118-123.	1.2	3
67	IR-ATR investigation of surface anisotropy in silicate glasses. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2017, 173, 608-617.	2.0	3
68	Analysis of the polarized IR reflectance spectra of the monoclinic Î±-oxalic acid dihydrate. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2019, 218, 1-8.	2.0	3
69	Dichroic Dipole Antenna Membranes from Aligned Linear BOPHY Dyes. Advanced Materials Interfaces, 0, , 2101490.	1.9	3
70	Smart Error Sum Based on Hybrid Two-Trace Two-Dimensional (2T2D) Correlation Analysis. Applied Spectroscopy, 2023, 77, 583-592.	1.2	3
71	Infrared optical properties of Li- and Xe-irradiated KTiOPO 4. Applied Physics A: Materials Science and Processing, 2004, 78, 589-596.	1.1	2
72	Angular dependence of the reflectance from an isotropic polydomain medium: effect of large domain size on total reflection. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2005, 22, 569.	0.8	2

#	Article	IF	Citations
73	The 390 cmâˆ’1 feature of polycrystalline hematiteâ€"An optical crystallite size effect. Icarus, 2009, 203, 303-309.	1.1	2
74	Infrared spectroscopy of quasi-ideal binary liquid mixtures: The challenges of conventional chemometric regression. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2022, 280, 121518.	2.0	2
75	Light-Matter Interaction. , 2013, , 87.		1
76	Dispersion analysis of sodium dichromate dihydrate Na2Cr2O7Â·2H2O single crystal. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2018, 205, 243-250.	2.0	1
77	Understanding longitudinal optical oscillator strengths and mode order. Physica B: Condensed Matter, 2020, 597, 412398.	1.3	1
78	Reply to comment on Improving Poor Man's Kramers-Kronig analysis and Kramers-Kronig constrained variational analysis. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2021, 261, 120071.	2.0	1
79	N₂O Adsorption and Photochemistry on Ceria Surfaces. Journal of Physical Chemistry C, 2022, 126, 2253-2263.	1.5	1
80	Correction to Slit-Enhanced Chiral- and Broadband Infrared Ultra-Sensing. ACS Photonics, 2018, 5, 4186-4186.	3.2	0
81	Complete dispersion analysis of single crystal EDDt. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2019, 206, 224-231.	2.0	0
82	Detection of siloxane thin films on glass substrate using IR ratio-reflectance spectrum. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2022, 271, 120893.	2.0	0