Dmitry Kurouski

List of Publications by Year
in descending order

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113 papers	4,657 citations	94381 37 h-index	114418 63 g-index
116 all docs	116 docs citations	116 times ranked	4356 citing authors

#	Article	IF	Citations
1	Exploring the structure and formation mechanism of amyloid fibrils by Raman spectroscopy: a review. Analyst, The, 2015, 140, 4967-4980.	1.7	206
2	Probing Redox Reactions at the Nanoscale with Electrochemical Tip-Enhanced Raman Spectroscopy. Nano Letters, 2015, 15, 7956-7962.	4.5	193
3	Surface-Enhanced Raman Spectroscopy Biosensing: In Vivo Diagnostics and Multimodal Imaging. Analytical Chemistry, 2016, 88, 6638-6647.	3.2	190
4	Infrared and Raman chemical imaging and spectroscopy at the nanoscale. Chemical Society Reviews, 2020, 49, 3315-3347.	18.7	178
5	Structure and Composition of Insulin Fibril Surfaces Probed by TERS. Journal of the American Chemical Society, 2012, 134, 13323-13329.	6.6	153
6	Amide I vibrational mode suppression in surface (SERS) and tip (TERS) enhanced Raman spectra of protein specimens. Analyst, The, 2013, 138, 1665.	1.7	146
7	Is Supramolecular Filament Chirality the Underlying Cause of Major Morphology Differences in Amyloid Fibrils?. Journal of the American Chemical Society, 2014, 136, 2302-2312.	6.6	143
8	Direct observation and pH control of reversed supramolecular chirality in insulin fibrils by vibrational circular dichroism. Chemical Communications, 2010, 46, 7154.	2.2	136
9	Detection and Identification of Plant Pathogens on Maize Kernels with a Hand-Held Raman Spectrometer. Analytical Chemistry, 2018, 90, 3009-3012.	3.2	132
10	In Situ Detection and Identification of Hair Dyes Using Surface-Enhanced Raman Spectroscopy (SERS). Analytical Chemistry, 2015, 87, 2901-2906.	3.2	107
11	Advanced spectroscopic techniques for plant disease diagnostics. A review. TrAC - Trends in Analytical Chemistry, 2019, 118, 43-49.	5.8	101
12	Detection and Identification of Fungal Infections in Intact Wheat and Sorghum Grain Using a Hand-Held Raman Spectrometer. Analytical Chemistry, 2018, 90, 8616-8621.	3.2	94
13	Normal and Reversed Supramolecular Chirality of Insulin Fibrils Probed by Vibrational Circular Dichroism at the Protofilament Level of Fibril Structure. Biophysical Journal, 2012, 103, 522-531.	0.2	93
14	Rapid and noninvasive diagnostics of Huanglongbing and nutrient deficits on citrus trees with a handheld Raman spectrometer. Analytical and Bioanalytical Chemistry, 2019, 411, 3125-3133.	1.9	88
15	Surface Characterization of Insulin Protofilaments and Fibril Polymorphs Using Tip-Enhanced Raman Spectroscopy (TERS). Biophysical Journal, 2014, 106, 263-271.	0.2	82
16	Spontaneous inter-conversion of insulin fibril chirality. Chemical Communications, 2012, 48, 2837.	2.2	81
17	Tip-Enhanced Raman Spectroscopy (TERS) for in Situ Identification of Indigo and Iron Gall Ink on Paper. Journal of the American Chemical Society, 2014, 136, 8677-8684.	6.6	81
18	Structural Characterization of Individual Î±-Synuclein Oligomers Formed at Different Stages of Protein Aggregation by Atomic Force Microscopy-Infrared Spectroscopy. Analytical Chemistry, 2020, 92, 6806-6810.	3.2	77

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19	Complementarity of Raman and Infrared Spectroscopy for Structural Characterization of Plant Epicuticular Waxes. ACS Omega, 2019, 4, 3700-3707.	1.6	76
20	Disulfide Bridges Remain Intact while Native Insulin Converts into Amyloid Fibrils. PLoS ONE, 2012, 7, e36989.	1.1	75
21	Structural differences between amyloid beta oligomers. Biochemical and Biophysical Research Communications, 2016, 477, 700-705.	1.0	65
22	Nanoscale Structural Characterization of Individual Viral Particles Using Atomic Force Microscopy Infrared Spectroscopy (AFM-IR) and Tip-Enhanced Raman Spectroscopy (TERS). Analytical Chemistry, 2020, 92, 11297-11304.	3.2	60
23	Spatially resolved spectroscopic differentiation of hydrophilic and hydrophobic domains on individual insulin amyloid fibrils. Scientific Reports, 2016, 6, 33575.	1.6	56
24	Tip-enhanced Raman spectroscopy: From concepts to practical applications. Chemical Physics Letters, 2016, 659, 16-24.	1.2	56
25	Enantioselective Nickel-Catalyzed Mizorokiâ€“Heck Cyclizations To Generate Quaternary Stereocenters. Organic Letters, 2017, 19, 3338-3341.	2.4	54
26	Nanoscale Structural Organization of Plant Epicuticular Wax Probed by Atomic Force Microscope Infrared Spectroscopy. Analytical Chemistry, 2019, 91, 2472-2479.	3.2	53
27	Advances of tip-enhanced Raman spectroscopy (TERS) in electrochemistry, biochemistry, and surface science. Vibrational Spectroscopy, 2017, 91, 3-15.	1.2	50
28	Enantioselective Synthesis of Î±-(Hetero)aryl Piperidines through Asymmetric Hydrogenation of Pyridinium Salts and Its Mechanistic Insights. Organic Letters, 2018, 20, 1333-1337.	2.4	48
29	Advances of Vibrational Circular Dichroism (VCD) in bioanalytical chemistry. A review. Analytica Chimica Acta, 2017, 990, 54-66.	2.6	47
30	Synthesis of Enantioenriched 2-Alkyl Piperidine Derivatives through Asymmetric Reduction of Pyridinium Salts. Organic Letters, 2016, 18, 4920-4923.	2.4	46
31	Raman spectroscopy as an early detection tool for rose rosette infection. Planta, 2019, 250, 1247-1254.	1.6	46
32	Pathogenic Serum Amyloid A 1.1 Shows a Long Oligomer-rich Fibrillation Lag Phase Contrary to the Highly Amyloidogenic Non-pathogenic SAA2.2. Journal of Biological Chemistry, 2013, 288, 2744-2755.	1.6	45
33	Direct Experimental Evidence of Hot Carrier-Driven Chemical Processes in Tip-Enhanced Raman Spectroscopy (TERS). Journal of Physical Chemistry C, 2020, 124, 2238-2244.	1.5	44
34	Plasmon-Driven Chemistry on Mono- and Bimetallic Nanostructures. Accounts of Chemical Research, 2021, 54, 2477-2487.	7.6	44
35	Non-invasive diagnostics of Liberibacter disease on tomatoes using a hand-held Raman spectrometer. Planta, 2020, 251, 64.	1.6	43
36	Unraveling near-field and far-field relationships for 3D SERS substrates â€“ a combined experimental and theoretical analysis. Analyst, The, 2016, 141, 1779-1788.	1.7	41

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37	Rapid and Noninvasive Typing and Assessment of Nutrient Content of Maize Kernels Using a Handheld Raman Spectrometer. ACS Omega, 2019, 4, 16330-16335.	1.6	39
38	Noninvasive and Nondestructive Detection of Cowpea Bruchid within Cowpea Seeds with a Hand-Held Raman Spectrometer. Analytical Chemistry, 2019, 91, 1733-1737.	3.2	39
39	Nanoscale Structural Organization of Insulin Fibril Polymorphs Revealed by Atomic Force Microscopyâ€“Infrared Spectroscopy (AFMâ€IR). ChemBioChem, 2020, 21, 481-485.	1.3	39
40	Rapid detection and prediction of chlortetracycline and oxytetracycline in animal feed using surface-enhanced Raman spectroscopy (SERS). Food Control, 2020, 114, 107243.	2.8	39
41	Raman Spectroscopy Enables Non-Invasive Identification of Peanut Genotypes and Value-Added Traits. Scientific Reports, 2020, 10, 7730.	1.6	38
42	Hydrogen Sulfide Inhibits Amyloid Formation. Journal of Physical Chemistry B, 2015, 119, 1265-1274.	1.2	37
43	Supramolecular chirality in peptide microcrystals. Chemical Communications, 2015, 51, 89-92.	2.2	36
44	Raman-Based Differentiation of Hemp, Cannabidiol-Rich Hemp, and Cannabis. Analytical Chemistry, 2020, 92, 7733-7737.	3.2	36
45	Unravelling the Structural Organization of Individual Î±-Synuclein Oligomers Grown in the Presence of Phospholipids. Journal of Physical Chemistry Letters, 2021, 12, 4407-4414.	2.1	36
46	Detection and identification of canker and blight on orange trees using a handâ€held Raman spectrometer. Journal of Raman Spectroscopy, 2019, 50, 1875-1880.	1.2	34
47	Confirmatory non-invasive and non-destructive differentiation between hemp and cannabis using a hand-held Raman spectrometer. RSC Advances, 2020, 10, 3212-3216.	1.7	33
48	Amyloid fibrils are â€œaliveâ€: spontaneous refolding from one polymorph to another. Chemical Communications, 2010, 46, 4249.	2.2	31
49	Levels of supramolecular chirality of polyglutamine aggregates revealed by vibrational circular dichroism. FEBS Letters, 2013, 587, 1638-1643.	1.3	31
50	Nanoscale Photocatalytic Activity of Gold and Goldâ€“Palladium Nanostructures Revealed by Tip-Enhanced Raman Spectroscopy. Journal of Physical Chemistry Letters, 2020, 11, 5531-5537.	2.1	31
51	Raman Spectroscopy vs Quantitative Polymerase Chain Reaction In Early Stage Huanglongbing Diagnostics. Scientific Reports, 2020, 10, 10101.	1.6	30
52	The Prevalence of Anions at Plasmonic Nanojunctions: A Closer Look at p-Nitrothiophenol. Journal of Physical Chemistry Letters, 2020, 11, 3809-3814.	2.1	30
53	Nanoscale Structural Analysis of a Lipid-Driven Aggregation of Insulin. Journal of Physical Chemistry Letters, 2022, 13, 2467-2473.	2.1	30
54	Raman-Based Diagnostics of Biotic and Abiotic Stresses in Plants. A Review. Frontiers in Plant Science, 2020, 11, 616672.	1.7	29

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55	Unsaturation in the Fatty Acids of Phospholipids Drastically Alters the Structure and Toxicity of Insulin Aggregates Grown in Their Presence. Journal of Physical Chemistry Letters, 2022, 13, 4563-4569.	2.1	29
56	Suppressing Molecular Charging, Nanochemistry, and Optical Rectification in the Tip-Enhanced Raman Geometry. Journal of Physical Chemistry Letters, 2020, 11, 5890-5895.	2.1	27
57	The degree of unsaturation of fatty acids in phosphatidylserine alters the rate of insulin aggregation and the structure and toxicity of amyloid aggregates. FEBS Letters, 2022, 596, 1424-1433.	1.3	27
58	Elucidation of Tip-Broadening Effect in Tip-Enhanced Raman Spectroscopy (TERS): A Cause of Artifacts or Potential for 3D TERS. Journal of Physical Chemistry C, 2018, 122, 24334-24340.	1.5	26
59	Forensic identification of urine on cotton and polyester fabric with a hand-held Raman spectrometer. Forensic Chemistry, 2018, 9, 44-49.	1.7	26
60	Raman Spectroscopy Enables Non-invasive and Confirmatory Diagnostics of Salinity Stresses, Nitrogen, Phosphorus, and Potassium Deficiencies in Rice. Frontiers in Plant Science, 2020, 11, 573321.	1.7	25
61	Raman spectroscopy enables phenotyping and assessment of nutrition values of plants: a review. Plant Methods, 2021, 17, 78.	1.9	25
62	Non-invasive identification of potato varieties and prediction of the origin of tuber cultivation using spatially offset Raman spectroscopy. Analytical and Bioanalytical Chemistry, 2020, 412, 4585-4594.	1.9	25
63	Rapid Filament Supramolecular Chirality Reversal of HET-s (218â€“289) Prion Fibrils Driven by pH Elevation. Journal of Physical Chemistry B, 2015, 119, 8521-8525.	1.2	24
64	Detection and structural characterization of insulin prefibrilar oligomers using surface enhanced Raman spectroscopy. Biotechnology Progress, 2014, 30, 488-495.	1.3	23
65	Elucidation of Photocatalytic Properties of Goldâ€“Platinum Bimetallic Nanoplates Using Tip-Enhanced Raman Spectroscopy. Journal of Physical Chemistry C, 2020, 124, 12850-12854.	1.5	23
66	Amyloid aggregates exert cell toxicity causing irreversible damages in the endoplasmic reticulum. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2022, 1868, 166485.	1.8	23
67	Non-Invasive Characterization of Single-, Double- and Triple-Viral Diseases of Wheat With a Hand-Held Raman Spectrometer. Frontiers in Plant Science, 2020, 11, 01300.	1.7	22
68	Isolating Toxic Insulin Amyloid Reactive Species that Lack Î²-Sheets and Have Wide pH Stability. Biophysical Journal, 2011, 100, 2792-2800.	0.2	21
69	Unraveling the Near- and Far-Field Relationship of 2D Surface-Enhanced Raman Spectroscopy Substrates Using Wavelength-Scan Surface-Enhanced Raman Excitation Spectroscopy. Journal of Physical Chemistry C, 2017, 121, 14737-14744.	1.5	21
70	Rapid degradation kinetics of amyloid fibrils under mild conditions by an archaeal chaperonin. Biochemical and Biophysical Research Communications, 2012, 422, 97-102.	1.0	20
71	Nanoscale structural characterization of plasmon-driven reactions. Nanophotonics, 2021, 10, 1657-1673.	2.9	20
72	Biochemical Origin of Raman-Based Diagnostics of Huanglongbing in Grapefruit Trees. Frontiers in Plant Science, 2021, 12, 680991.	1.7	20

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73	Probing the Redox Selectivity on Au@Pd and Au@Pt Bimetallic Nanoplates by Tip-Enhanced Raman Spectroscopy. ACS Photonics, 2021, 8, 2112-2119.	3.2	19
74	The impact of protein disulfide bonds on the amyloid fibril morphology. International Journal of Biomedical Nanoscience and Nanotechnology, 2011, 2, 167.	0.1	18
75	Reengineered BIâ€ÐIME Ligand Core Based on Computer Modeling to Increase Selectivity in Asymmetric Suzukiâ€“Miyaura Coupling for the Challenging Axially Chiral HIV Integrase Inhibitor. Advanced Synthesis and Catalysis, 2016, 358, 3522-3527.	2.1	18
76	Development of a Scalable, Chromatography-Free Synthesis of t-Bu-SMS-Phos and Application to the Synthesis of an Important Chiral CF₃-Alcohol Derivative with High Enantioselectivity Using Rh-Catalyzed Asymmetric Hydrogenation. Journal of Organic Chemistry, 2018, 83, 1448-1461.	1.7	18
77	Characterization of Substrates and Surface-Enhancement in Atomic Force Microscopy Infrared Analysis of Amyloid Aggregates. Journal of Physical Chemistry C, 2022, 126, 4157-4162.	1.5	18
78	Gap-Mode Tip-Enhanced Raman Scattering on Au Nanoplates of Varied Thickness. Journal of Physical Chemistry Letters, 2020, 11, 3815-3820.	2.1	17
79	Underlying Mechanisms of Hot Carrier-Driven Reactivity on Bimetallic Nanostructures. Journal of Physical Chemistry C, 2021, 125, 2492-2501.	1.5	17
80	Tip-enhanced Raman imaging of photocatalytic reactions on thermally-reshaped gold and goldâ€“palladium microplates. Chemical Communications, 2021, 57, 891-894.	2.2	17
81	Surface-Enhanced Raman Analysis of Underlaying Colorants on Redyed Hair. Analytical Chemistry, 2019, 91, 7313-7318.	3.2	15
82	Confirmatory non-invasive and non-destructive identification of poison ivy using a hand-held Raman spectrometer. RSC Advances, 2020, 10, 21530-21534.	1.7	14
83	Complementarity of Raman and Infrared spectroscopy for rapid characterization of fucoidan extracts. Plant Methods, 2021, 17, 130.	1.9	14
84	Acidic pH promotes oligomerization and membrane insertion of the BclXL apoptotic repressor. Archives of Biochemistry and Biophysics, 2012, 528, 32-44.	1.4	12
85	Tip-Enhanced Raman Analysis of Plasmonic and Photocatalytic Properties of Copper Nanomaterials. Journal of Physical Chemistry Letters, 2021, 12, 8335-8340.	2.1	12
86	A rapid and convenient screening method for detection of restricted monensin, decoquinate, and lasalocid in animal feed by applying SERS and chemometrics. Food and Chemical Toxicology, 2020, 144, 111633.	1.8	11
87	Probing the plasmon-driven Suzukiâ€“Miyaura coupling reactions with cargo-TERS towards tailored catalysis. Nanoscale, 2021, 13, 11793-11799.	2.8	11
88	Potential of Spatially Offset Raman Spectroscopy for Detection of Zebra Chip and Potato Virus Y Diseases of Potatoes (Solanum tuberosum). ACS Agricultural Science and Technology, 2021, 1, 211-221.	1.0	10
89	Raman-Based Diagnostics of Stalk Rot Disease of Maize Caused by Colletotrichum graminicola. Frontiers in Plant Science, 2021, 12, 722898.	1.7	10
90	Lipids reverse supramolecular chirality and reduce toxicity of amyloid fibrils. FEBS Journal, 2022, 289, 7537-7544.	2.2	10

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91	Deconstruction of Stable Cross-Beta Fibrillar Structures into Toxic and Nontoxic Products Using a Mutated Archaeal Chaperonin. ACS Chemical Biology, 2013, 8, 2095-2101.	1.6	9
92	Thermal Reshaping of Gold Microplates: Three Possible Routes and Their Transformation Mechanisms. ACS Applied Materials & Interfaces, 2019, 11, 41813-41820.	4.0	9
93	Infrared analysis of hair dyeing and bleaching history. Analytical Methods, 2020, 12, 3741-3747.	1.3	9
94	Raman spectroscopyâ€based diagnostics of water deficit and salinity stresses in two accessions of peanut. Plant Direct, 2021, 5, e342.	0.8	9
95	Use of Raman spectroscopy and size-exclusion chromatography coupled with HDX-MS spectroscopy for studying conformational changes of small proteins in solution. Journal of Pharmaceutical and Biomedical Analysis, 2020, 189, 113399.	1.4	8
96	Structural landscape of the proline-rich domain of Sos1 nucleotide exchange factor. Biophysical Chemistry, 2013, 175-176, 54-62.	1.5	7
97	Raman Spectroscopy Can Distinguish Glyphosate-Susceptible and -Resistant Palmer Amaranth (Amaranthus palmeri). Frontiers in Plant Science, 2021, 12, 657963.	1.7	7
98	Raman Spectroscopy and Machine Learning for Agricultural Applications: Chemometric Assessment of Spectroscopic Signatures of Plants as the Essential Step Toward Digital Farming. Frontiers in Plant Science, 2022, 13, 887511.	1.7	7
99	Structural Characterization of Insulin Fibril Surfaces using Tip Enhanced Raman Spectroscopy (TERS). Biophysical Journal, 2013, 104, 49a.	0.2	6
100	Heat-induced fibrillation of BclXL apoptotic repressor. Biophysical Chemistry, 2013, 179, 12-25.	1.5	6
101	Non-invasive post-mortem interval diagnostics using a hand-held Raman spectrometer. Forensic Chemistry, 2020, 20, 100270.	1.7	6
102	Non-Invasive Identification of Nutrient Components in Grain. Molecules, 2021, 26, 3124.	1.7	6
103	High-Resolution Raman Nano-Imaging with an Imperfect Probe. Journal of Physical Chemistry C, 2022, 126, 4089-4094.	1.5	6
104	Exploring a possibility of using Raman spectroscopy for detection of Lyme disease. Journal of Biophotonics, 2021, 14, e202000477.	1.1	5
105	Raman Spectroscopy Enables Non-invasive and Confirmatory Diagnostics of Aluminum and Iron Toxicities in Rice. Frontiers in Plant Science, 2022, 13, .	1.7	5
106	Metal-Free Cycloetherification by in Situ Generated P-Stereogenic Î±-Diazanium Intermediates: A Convergent Synthesis of Enantiomerically Pure Dihydrobenzooxaphospholes. Organic Letters, 2017, 19, 894-897.	2.4	4
107	A Proof-of-Principle Study of Non-invasive Identification of Peanut Genotypes and Nematode Resistance Using Raman Spectroscopy. Frontiers in Plant Science, 2021, 12, 664243.	1.7	4
108	Raman spectroscopy enables highly accurate differentiation between young male and female hemp plants. Planta, 2022, 255, 85.	1.6	4

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109	Raman-based identification of tick species (Ixodidae) by spectroscopic analysis of their feces. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2022, 271, 120966.	2.0	2
110	Amyloid Fibrils are â€œAliveâ€•as Evident from Deep UV Raman Spectroscopic Examination: an Instrumentation Driven Discovery. , 2010, , .		1
111	Supramolecular Organization of Amyloid Fibrils. , 2016, , .		1
112	Inhibition of Protein Fibrillation by Hydrogen Sulfide1. , 2019, , .		0
113	Raman Spectroscopy Enables Confirmatory Diagnostics of Fusarium Wilt in Asymptomatic Banana. Frontiers in Plant Science, 0, 13, .	1.7	0