

Chul-Un Ro

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2087181/publications.pdf>

Version: 2024-02-01

104
papers

4,238
citations

126907

33
h-index

128289

60
g-index

107
all docs

107
docs citations

107
times ranked

4607
citing authors

#	ARTICLE	IF	CITATIONS
1	A global assessment of precipitation chemistry and deposition of sulfur, nitrogen, sea salt, base cations, organic acids, acidity and pH, and phosphorus. <i>Atmospheric Environment</i> , 2014, 48, 3-100.	4.1	650
2	A review of single aerosol particle studies in the atmosphere of East Asia: morphology, mixing state, source, and heterogeneous reactions. <i>Journal of Cleaner Production</i> , 2016, 112, 1330-1349.	9.3	235
3	The Amazon Tall Tower Observatory (ATTO): overview of pilot measurements on ecosystem ecology, meteorology, trace gases, and aerosols. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 10723-10776.	4.9	218
4	Determination of Low-Z Elements in Individual Environmental Particles Using Windowless EPMA. <i>Analytical Chemistry</i> , 1999, 71, 1521-1528.	6.5	134
5	A Monte Carlo Program for Quantitative Electron-Induced X-ray Analysis of Individual Particles. <i>Analytical Chemistry</i> , 2003, 75, 851-859.	6.5	125
6	Source identification of particulate matter collected at underground subway stations in Seoul, Korea using quantitative single-particle analysis. <i>Atmospheric Environment</i> , 2010, 44, 2287-2293.	4.1	114
7	Chemical Compositions of Subway Particles in Seoul, Korea Determined by a Quantitative Single Particle Analysis. <i>Environmental Science & Technology</i> , 2008, 42, 9051-9057.	10.0	107
8	Single-Particle Characterization of Four "Asian Dust" Samples Collected in Korea, Using Low-Z Particle Electron Probe X-ray Microanalysis. <i>Environmental Science & Technology</i> , 2005, 39, 1409-1419.	10.0	100
9	Direct observation of nitrate and sulfate formations from mineral dust and sea-salts using low-Z particle electron probe X-ray microanalysis. <i>Atmospheric Environment</i> , 2006, 40, 3869-3880.	4.1	83
10	Light Element Analysis of Individual Microparticles Using Thin-Window EPMA. <i>Mikrochimica Acta</i> , 2000, 132, 349-355.	5.0	82
11	Elevated nitrogen-containing particles observed in Asian dust aerosol samples collected at the marine boundary layer of the Bohai Sea and the Yellow Sea. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 6933-6947.	4.9	73
12	Chemical speciation of size-segregated floor dusts and airborne magnetic particles collected at underground subway stations in Seoul, Korea. <i>Journal of Hazardous Materials</i> , 2012, 213-214, 331-340.	12.4	72
13	Investigation of the Chemical Mixing State of Individual Asian Dust Particles by the Combined Use of Electron Probe X-ray Microanalysis and Raman Microspectrometry. <i>Analytical Chemistry</i> , 2012, 84, 3145-3154.	6.5	70
14	Hygroscopic behavior of NaCl-MgCl ₂ mixture particles as nascent sea-spray aerosol surrogates and observation of efflorescence during humidification. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 11273-11290.	4.9	70
15	Determination of Chemical Species in Individual Aerosol Particles Using Ultrathin Window EPMA. <i>Environmental Science & Technology</i> , 2000, 34, 3023-3030.	10.0	67
16	Single-Particle Analysis of Aerosols at Cheju Island, Korea, Using Low-Z Electron Probe X-ray Microanalysis: A Direct Proof of Nitrate Formation from Sea Salts. <i>Environmental Science & Technology</i> , 2001, 35, 4487-4494.	10.0	67
17	Chemical speciation of individual atmospheric particles using low-Z electron probe X-ray microanalysis. <i>Atmospheric Environment</i> , 2001, 35, 4995-5005.	4.1	65
18	Single-Particle Characterization of Summertime Arctic Aerosols Collected at Ny-Ålesund, Svalbard. <i>Environmental Science & Technology</i> , 2010, 44, 2348-2353.	10.0	65

#	ARTICLE	IF	CITATIONS
19	An Expert System for Chemical Speciation of Individual Particles Using Low-Z Particle Electron Probe X-ray Microanalysis Data. <i>Analytical Chemistry</i> , 2004, 76, 1322-1327.	6.5	61
20	Deliquescence and efflorescence behavior of individual NaCl and KCl mixture aerosol particles. <i>Atmospheric Environment</i> , 2014, 82, 36-43.	4.1	61
21	Hygroscopic properties of NaCl and NaNO ₃ mixture particles as reacted inorganic sea-salt aerosol surrogates. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 3379-3393.	4.9	55
22	Changes in Freshwater Acidification Trends in Canada's Atlantic Provinces: 1983-1997. <i>Water, Air, and Soil Pollution</i> , 2002, 135, 335-354.	2.4	53
23	Chemical characteristics of long-range transport aerosol at background sites in Korea. <i>Atmospheric Environment</i> , 2009, 43, 5556-5566.	4.1	52
24	Iron Speciation of Airborne Subway Particles by the Combined Use of Energy Dispersive Electron Probe X-ray Microanalysis and Raman Microspectrometry. <i>Analytical Chemistry</i> , 2013, 85, 10424-10431.	6.5	49
25	Quantitative characterization of individual aerosol particles by thin-window electron probe microanalysis combined with iterative simulation. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2000, 55, 1017-1030.	2.9	45
26	Combined Use of Optical and Electron Microscopic Techniques for the Measurement of Hygroscopic Property, Chemical Composition, and Morphology of Individual Aerosol Particles. <i>Analytical Chemistry</i> , 2010, 82, 7999-8009.	6.5	43
27	X-ray Spectrometry. <i>Analytical Chemistry</i> , 2012, 84, 636-668.	6.5	42
28	Organic surface coating on Coccolithophores - <i>Emiliania huxleyi</i> : Its determination and implication in the marine carbon cycle. <i>Microchemical Journal</i> , 2009, 91, 266-271.	4.5	41
29	Single-Particle Characterization of Urban Aerosol Particles Collected in Three Korean Cities Using Low-Z Electron Probe X-ray Microanalysis. <i>Environmental Science & Technology</i> , 2002, 36, 4770-4776.	10.0	40
30	Thermal stability of beam sensitive atmospheric aerosol particles in electron probe microanalysis at liquid nitrogen temperature. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2003, 58, 479-496.	2.9	38
31	Single-particle characterization of aerosol samples collected before and during an Asian dust storm in Chuncheon, Korea. <i>Atmospheric Environment</i> , 2008, 42, 8738-8746.	4.1	38
32	Influence of Collecting Substrates on the Characterization of Hygroscopic Properties of Inorganic Aerosol Particles. <i>Analytical Chemistry</i> , 2014, 86, 2648-2656.	6.5	38
33	Assessment of the air quality (NO ₂ , SO ₂ , O ₃ and particulate matter) in the Plantin-Moretus Museum/Print Room in Antwerp, Belgium, in different seasons of the year. <i>Microchemical Journal</i> , 2012, 102, 49-53.	4.5	37
34	Characterization of individual submicrometer aerosol particles collected in Incheon, Korea, by quantitative transmission electron microscopy energy-dispersive X-ray spectrometry. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	35
35	Investigation of aged aerosols in size-resolved Asian dust storm particles transported from Beijing, China, to Incheon, Korea, using low-Z particle EPMA. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 3307-3323.	4.9	35
36	Characterisation of individual aerosol particles collected during a haze episode in Incheon, Korea using the quantitative ED-EPMA technique. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 1327-1337.	4.9	33

#	ARTICLE	IF	CITATIONS
37	Investigation of aged Asian dust particles by the combined use of quantitative ED-EPMA and ATR-FTIR imaging. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 3463-3480.	4.9	32
38	Speciation of Individual Mineral Particles of Micrometer Size by the Combined Use of Attenuated Total Reflectance-Fourier Transform-Infrared Imaging and Quantitative Energy-Dispersive Electron Probe X-ray Microanalysis Techniques. <i>Analytical Chemistry</i> , 2010, 82, 6193-6202.	6.5	31
39	Single-particle investigation of summertime and wintertime Antarctic sea spray aerosols using low- α -particle EPMA, Raman microspectrometry, and ATR-FTIR imaging techniques. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 13823-13836.	4.9	31
40	Characterization of LiF Using XPS. <i>Surface Science Spectra</i> , 1992, 1, 277-283.	1.3	30
41	Relationship between reactive oxygen species and water-soluble organic compounds: Time-resolved benzene carboxylic acids measurement in the coastal area during the KORUS-AQ campaign. <i>Environmental Pollution</i> , 2017, 231, 1-12.	7.5	30
42	Single-particle characterization of four aerosol samples collected in Chuncheon, Korea, during Asian dust storm events in 2002. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	27
43	Quantitative ED-EPMA combined with morphological information for the characterization of individual aerosol particles collected in Incheon, Korea. <i>Atmospheric Environment</i> , 2009, 43, 3445-3453.	4.1	27
44	Attenuated Total Reflectance FT-IR Imaging and Quantitative Energy Dispersive-Electron Probe X-ray Microanalysis Techniques for Single Particle Analysis of Atmospheric Aerosol Particles. <i>Analytical Chemistry</i> , 2009, 81, 6695-6707.	6.5	27
45	Thin-window electron probe X-ray microanalysis of individual atmospheric particles above the North Sea. <i>Atmospheric Environment</i> , 2005, 39, 3231-3242.	4.1	26
46	Single-Particle Characterization of Summertime Antarctic Aerosols Collected at King George Island Using Quantitative Energy-Dispersive Electron Probe X-ray Microanalysis and Attenuated Total Reflection Fourier Transform-Infrared Imaging Techniques. <i>Environmental Science & Technology</i> , 2011, 45, 6275-6282.	10.0	26
47	Morphological and chemical composition characteristics of summertime atmospheric particles collected at Tokchok Island, Korea. <i>Atmospheric Environment</i> , 2009, 43, 3364-3373.	4.1	25
48	Annual resolution analysis of a SW-France stalagmite by X-ray synchrotron microprobe analysis. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2003, 58, 851-865.	2.9	24
49	Chemical Speciation of Individual Airborne Particles by the Combined Use of Quantitative Energy-Dispersive Electron Probe X-ray Microanalysis and Attenuated Total Reflection Fourier Transform-Infrared Imaging Techniques. <i>Analytical Chemistry</i> , 2010, 82, 7987-7998.	6.5	24
50	Real-Time Investigation of Chemical Compositions and Hygroscopic Properties of Aerosols Generated from NaCl and Malonic Acid Mixture Solutions Using in Situ Raman Microspectrometry. <i>Environmental Science & Technology</i> , 2017, 51, 263-270.	10.0	24
51	Simulation study on regeneration of depth profiles from angle-resolved XPS data. <i>Surface and Interface Analysis</i> , 1997, 25, 869-877.	1.8	23
52	X-ray Spectrometry. <i>Analytical Chemistry</i> , 2008, 80, 4421-4454.	6.5	23
53	Single-particle analysis of industrial emissions brings new insights for health risk assessment of PM. <i>Atmospheric Pollution Research</i> , 2018, 9, 697-704.	3.8	23
54	Single-particle characterization of aerosols collected at a remote site in the Amazonian rainforest and an urban site in Manaus, Brazil. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 1221-1240.	4.9	23

#	ARTICLE	IF	CITATIONS
55	Heterogeneity Assessment in Individual CaCO ₃ ~CaSO ₄ Particles Using Ultrathin Window Electron Probe X-ray Microanalysis. <i>Analytical Chemistry</i> , 2001, 73, 4574-4583.	6.5	22
56	Combined use of quantitative ED-EPMA, Raman microspectrometry, and ATR-FTIR imaging techniques for the analysis of individual particles. <i>Analyst, The</i> , 2014, 139, 3949-3960.	3.5	22
57	Single-particle characterization of indoor aerosol particles collected at an underground shopping area in Seoul, Korea. <i>Indoor Air</i> , 2011, 21, 12-24.	4.3	21
58	Hygroscopic behavior of wet dispersed and dry deposited NaNO ₃ particles. <i>Atmospheric Environment</i> , 2012, 60, 68-75.	4.1	21
59	Contribution of Canada~United States transboundary transport to wet deposition of sulphur and nitrogen oxides~A mass balance approach. <i>Atmospheric Environment</i> , 2008, 42, 2518-2529.	4.1	20
60	Single-Particle Mineralogy of Chinese Soil Particles by the Combined Use of Low-Z Particle Electron Probe X-ray Microanalysis and Attenuated Total Reflectance-FT-IR Imaging Techniques. <i>Analytical Chemistry</i> , 2011, 83, 7970-7977.	6.5	19
61	Acid solution decreases the compressional wave velocity of sandstone from the Yungang Grottoes, Datong, China. <i>Heritage Science</i> , 2019, 7, .	2.3	19
62	Molecular speciation of microparticles: application of pattern recognition techniques to laser microprobe mass spectrometric data. <i>Analytica Chimica Acta</i> , 1991, 243, 139-147.	5.4	18
63	X-ray Spectrometry. <i>Analytical Chemistry</i> , 2000, 72, 211-234.	6.5	18
64	Studies on the wood tissue substitution by silica and calcite during the preservation of fossil wood. <i>Journal of Alloys and Compounds</i> , 2004, 362, 107-115.	5.5	18
65	Nitrogen and sulfur compounds in coastal Antarctic fine aerosol particles~an insight using non-destructive X-ray microanalytical methods. <i>Atmospheric Environment</i> , 2006, 40, 4691-4702.	4.1	18
66	X-ray Spectrometry. <i>Analytical Chemistry</i> , 2010, 82, 4950-4987.	6.5	18
67	Characterization of Summertime Aerosol Particles Collected at Subway Stations in Seoul, Korea Using Low-Z Particle Electron Probe X-ray Microanalysis. <i>Asian Journal of Atmospheric Environment</i> , 2010, 4, 97-105.	1.1	18
68	Multi-Modal Compositional Analysis of Layered Paint Chips of Automobiles by the Combined Application of ATR-FTIR Imaging, Raman Microspectrometry, and SEM/EDX. <i>Molecules</i> , 2019, 24, 1381.	3.8	17
69	Single-particle characterization of soil samples collected at various arid areas of China, using low-Z particle electron probe X-ray microanalysis~†. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2006, 61, 393-399.	2.9	16
70	Analyses of petrified wood by electron, X-ray and optical microprobes. <i>Journal of Analytical Atomic Spectrometry</i> , 1999, 14, 435-446.	3.0	15
71	Evaluation of energy-dispersive x-ray spectra of low-Z elements from electron-probe microanalysis of individual particles. <i>X-Ray Spectrometry</i> , 2001, 30, 419-426.	1.4	15
72	Single-particle characterization of ~Asian Dust~certified reference materials using low-Z particle electron probe X-ray microanalysis. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2006, 61, 400-406.	2.9	15

#	ARTICLE	IF	CITATIONS
73	Hygroscopic Behavior of Ammonium Sulfate, Ammonium Nitrate, and their Mixture Particles. <i>Asian Journal of Atmospheric Environment</i> , 2019, 13, 196-211.	1.1	15
74	Application of chemometric methods for classification of atmospheric particles based on thin-window electron probe microanalysis data. <i>Analytica Chimica Acta</i> , 2001, 446, 209-220.	5.4	14
75	Assessment of homogeneity of candidate reference material at the nanogram level and investigation on representativeness of single particle analysis using electron probe X-ray microanalysis. <i>Analytica Chimica Acta</i> , 1999, 389, 151-160.	5.4	13
76	Analysis of speleothems by electron and X-ray microprobes. <i>Journal of Analytical Atomic Spectrometry</i> , 2001, 16, 90-95.	3.0	13
77	Studies of Spatial Variabilities of Airborne Metals Across Four Different Land-Use Types. <i>Water, Air, and Soil Pollution</i> , 2002, 138, 7-24.	2.4	13
78	Single-particle characterization of municipal solid waste (MSW) ash particles using low-Z particle electron probe X-ray microanalysis. <i>Atmospheric Environment</i> , 2006, 40, 2873-2881.	4.1	11
79	Molecular mass concentrations for a powdered SRM sample using a quantitative single particle analysis. <i>Analytica Chimica Acta</i> , 2008, 619, 14-19.	5.4	11
80	Characterization of Individual Atmospheric Aerosols Using Quantitative Energy Dispersive-Electron Probe X-ray Microanalysis: A Review. <i>Asian Journal of Atmospheric Environment</i> , 2010, 4, 115-140.	1.1	11
81	Long-range transport impacts from biomass burning and secondary pollutant sources based on receptor models during KORUS-AQ campaign. <i>Atmospheric Environment</i> , 2022, 276, 119060.	4.1	11
82	Investigation of chemical composition of belemnite rostra by synchrotron-based X-ray microfluorescence and diffraction and electron microprobe. <i>Journal of Alloys and Compounds</i> , 2004, 362, 99-106.	5.5	10
83	The influence of collecting substrates on the single-particle characterization of real atmospheric aerosols. <i>Analytica Chimica Acta</i> , 2010, 658, 120-127.	5.4	10
84	Hygroscopic behavior of aerosols generated from solutions of 3-methyl-1,2,3-butanetricarboxylic acid, its sodium salts, and its mixtures with NaCl. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 14103-14122.	4.9	10
85	Single-Particle Characterization of Atmospheric Aerosols Collected at Gosan, Korea, during the Asian Pacific Regional Aerosol Characterization Experiment Field Campaign Using Low-Z (Atomic Number) Particle Electron Probe X-ray Microanalysis. <i>Journal of the Air and Waste Management Association</i> , 2011, 61, 1183-1191.	1.9	9
86	Nondestructive Characterization of Municipal-Solid-Waste-Contaminated Surface Soil by Energy-Dispersive X-ray Fluorescence and Low-Z (Atomic Number) Particle Electron Probe X-ray Microanalysis. <i>Journal of the Air and Waste Management Association</i> , 2011, 61, 1102-1114.	1.9	9
87	An investigation into the relationship between the major chemical components of particulate matter in urban air. <i>Chemosphere</i> , 2014, 95, 387-394.	8.2	9
88	Single particle mineralogy of microparticles from Himalayan ice-cores using SEM/EDX and ATR-FTIR imaging techniques for identification of volcanic ash signatures. <i>Chemical Geology</i> , 2019, 504, 205-215.	3.3	9
89	Characterization of size-resolved urban haze particles collected in summer and winter at Taiyuan City, China using quantitative electron probe X-ray microanalysis. <i>Atmospheric Research</i> , 2017, 190, 29-42.	4.1	8
90	Determination of Atmospheric Perfluorocarbon Background Concentrations of fL/L Range at the Western Coastal Area of Korea. <i>Bulletin of the Korean Chemical Society</i> , 2002, 23, 301-308.	1.9	8

#	ARTICLE	IF	CITATIONS
91	Collisional energy transfer in the two-channel thermal unimolecular reaction of bromoethane-2-d. The Journal of Physical Chemistry, 1987, 91, 2354-2358.	2.9	7
92	Quantitative energy-dispersive electron probe X-ray microanalysis of individual particles. Powder Diffraction, 2006, 21, 140-144.	0.2	7
93	Alveolar macrophage reaction to PM2.5 of hazy day in vitro: Evaluation methods and mitochondrial screening to determine mechanisms of biological effect. Ecotoxicology and Environmental Safety, 2019, 174, 566-573.	6.0	6
94	Aerosol Hygroscopicity on A Single Particle Level Using Microscopic and Spectroscopic Techniques: A Review. Asian Journal of Atmospheric Environment, 2020, 14, 177-209.	1.1	6
95	Hygroscopic behavior and chemical reactivity of aerosols generated from mixture solutions of low molecular weight dicarboxylic acids and NaCl. Physical Chemistry Chemical Physics, 2021, 23, 11052-11064.	2.8	4
96	Microspectrometric Investigation of Petrified Wood from South-Eastern Poland. Mikrochimica Acta, 2001, 137, 173-183.	5.0	3
97	Quantitative energy-dispersive electron probe X-ray microanalysis for single-particle analysis and its application for characterizing atmospheric aerosol particles. Pramana - Journal of Physics, 2011, 76, 281-292.	1.8	3
98	Microscopic Single-Particle Analytical Methods for Aerosol Characterisation. Comprehensive Analytical Chemistry, 2015, , 331-366.	1.3	2
99	Single-particle Characterization of Aerosol Particles Collected Nearby a Lead Smelter in China. Asian Journal of Atmospheric Environment, 2012, 6, 83-95.	1.1	2
100	Tracer Experiment for the Investigation of Urban Scale Dispersion of Air Pollutants - Simulation by CALPUFF Dispersion Model and Diffusion Feature of Tracer Gases. Journal of Korean Society for Atmospheric Environment, 2007, 23, 405-419.	1.1	2
101	Single-particle Characterization of Aerosol Samples Collected at an Underground Shopping Area. Journal of Korean Society for Atmospheric Environment, 2008, 24, 594-603.	1.1	1
102	Single-Particle Characterization of Municipal Solid Waste (MSW) Ash Particles Using Low-Z Particle Electron Probe X-ray Microanalysis. Journal of Aerosol Science, 2004, 35, S1091-S1092.	3.8	0
103	Tracer Experiment for the Investigation of Urban Scale Dispersion of Air Pollutants - An Improved Method for the Release and Determination of Perfluorocarbon Tracers in the Urban Atmosphere. Journal of Korean Society for Atmospheric Environment, 2007, 23, 547-556.	1.1	0
104	Diagnosis of Transboundary Mass Fluxes from Modelled North American Regional Sulphur and Nitrogen Deposition Fields. Springer Proceedings in Complexity, 2016, , 295-300.	0.3	0