Ryota Watanabe

List of Publications by Year
in descending order

42 papers	1,576 citations	471371 17 h-index	302012 39 g-index
42 all docs	42 docs citations	42 times ranked	1925 citing authors

#	Article	IF	Citations
1	All solid-state battery with sulfur electrode and thio-LISICON electrolyte. Journal of Power Sources, 2008, 182, 621-625.	4.0	229
2	All-solid-state Liâ€“sulfur batteries with mesoporous electrode and thio-LISICON solid electrolyte. Journal of Power Sources, 2013, 222, 237-242.	4.0	194
3	Mechanism of Formation of Uniform-Sized Silica Nanospheres Catalyzed by Basic Amino Acids. Chemistry of Materials, 2009, 21, 3719-3729.	3.2	169
4	Facile control of crystallite size of ZSM-5 catalyst for cracking of hexane. Microporous and Mesoporous Materials, 2011, 145, 165-171.	2.2	163
5	A new one-pot method for the synthesis of Cu nanoparticles for low temperature bonding. Journal of Materials Chemistry, 2012, 22, 25198.	6.7	136
6	Extension of size of monodisperse silica nanospheres and their well-ordered assembly. Journal of Colloid and Interface Science, 2011, 360, 1-7.	5.0	115
7	All-solid-state lithiumâ€“sulfur batteries with three-dimensional mesoporous electrode structures. Journal of Power Sources, 2016, 330, 120-126.	4.0	71
8	Synthesis and application of colloidal nanocrystals of the MFI-type zeolites. Journal of Colloid and Interface Science, 2011, 356, 434-441.	5.0	48
9	Reaction mechanism of all-solid-state lithiumâ€“sulfur battery with two-dimensional mesoporous carbon electrodes. Journal of Power Sources, 2013, 243, 60-64.	4.0	44
10	CO₂-free electric power circulation via direct charge and discharge using the glycolic acid/oxalic acid redox couple. Energy and Environmental Science, 2015, 8, 1456-1462.	15.6	40
11	Insight into interfacial compatibilization of glass-fiber-reinforced polypropylene (PP) using maleic-anhydride modified PP employing infrared spectroscopic imaging. Composites Science and Technology, 2020, 199, 108379.	3.8	30
12	Hydrogenation of oxalic acid using light-assisted water electrolysis for the production of an alcoholic compound. Green Chemistry, 2016, 18, 3700-3706.	4.6	26
13	Pressure-Free Bonding of Metallic Plates with Ni Affinity Layers Using Cu Nanoparticles. Journal of Electronic Materials, 2014, 43, 774-779.	1.0	24
14	Structure-property relationships of polypropylene-based nanocomposites obtained by dispersing mesoporous silica into hydroxyl-functionalized polypropylene. Part 1: toughness, stiffness and transparency. Polymer Journal, 2018, 50, 1057-1065.	1.3	24
15	Reinforcement mechanism of functionalized polypropylene containing hydroxyl group nanocomposites studied by rheo-optical near-infrared spectroscopy. European Polymer Journal, 2017, 92, 86-96.	2.6	20
16	Polypropylene-Based Nanocomposite with Enhanced Aging Stability by Surface Grafting of Silica Nanofillers with a Silane Coupling Agent Containing an Antioxidant. ACS Omega, 2020, 5, 12431-12439.	1.6	20
17	Pressureless Bonding by Use of Cu and Sn Mixed Nanoparticles. Journal of Electronic Materials, 2014, 43, 4413-4420.	1.0	18
18	Study of matrix-filler interaction of polypropylene/silica composite by combined infrared (IR) spectroscopic imaging and disrelation mapping. Composites Part A: Applied Science and Manufacturing, 2020, 128, 105658.	3.8	18

#	Article	IF	Citations
19	Highly ductile polypropylene-based nanocomposites by dispersing monodisperse silica nanospheres in functionalized polypropylene containing hydroxyl groups. Polymer, 2016, 99, 63-71.	1.8	17
20	Molecular-Scale Deformation of Polypropylene/Silica Composites Probed by Rheo-Optical Fourier-Transform Infrared (FTIR) Imaging Analysis Combined with Disrelation Mapping. Analytical Chemistry, 2020, 92, 12160-12167.	3.2	17
21	Synthesis of well-ordered nanospheres with uniform mesopores assisted by basic amino acids. Studies in Surface Science and Catalysis, 2007, 170, 1774-1780.	1.5	15
22	Enhancement of pressure-free bonding with Cu particles by the addition of Cuâ€“Ni alloy nanoparticles. Journal of Materials Chemistry C, 2014, 2, 3542.	2.7	15
23	Structureâˆ’property relationships of polypropylene-based nanocomposites obtained by dispersing mesoporous silica into hydroxyl-functionalized polypropylene. Part 2: Matrixâˆ’filler interactions and pore filling of mesoporous silica characterized by evolved gas analysis. Polymer Journal, 2018, 50, 1067-1077.	1.3	14
24	Highâ€Strength Pressureâ€Free Bonding Using Cu and Niâ€Sn Nanoparticles. Particle and Particle Systems Characterization, 2014, 31, 699-705.	1.2	12
25	Degradation mechanism of carbon fiber-reinforced thermoplastics exposed to hot steam studied by chemical and structural analyses of nylon 6 matrix. Composites Part A: Applied Science and Manufacturing, 2018, 112, 126-133.	3.8	12
26	Management of both toughness and stiffness of polypropylene nanocomposites using poly(5â€hexenâ€1â€olâ€<i>co</i>â€propylene) and silica nanospheres. Polymers for Advanced Technologies, 2018, 29, 417-423.	1.6	9
27	Solvent-induced degradation of polyurethane studied by two-dimensional (2D) infrared (IR) correlation spectroscopy. Vibrational Spectroscopy, 2020, 108, 103062.	1.2	9
28	Rheo-Optical Near-Infrared (NIR) Characterization of Hydroxyl-Functionalized Polypropylene (PPOH)-Mesoporous Silica Nanocomposites Using Two-Trace Two-Dimensional (2T2D) Correlation Analysis. Applied Spectroscopy, 2019, 73, 000370281986156.	1.2	8
29	Accelerated aging-induced variation of polypropylene (PP) structure studied by two-dimensional (2D) small-angle X-ray scattering (SAXS) correlation spectroscopy. Journal of Molecular Structure, 2020, 1207, 127764.	1.8	8
30	Fourier Transform Infrared Imaging Analysis of Interactions Between Polypropylene Grafted with Maleic Anhydride and Silica Spheres Using Two-Trace Two-Dimensional Correlation Mapping. Applied Spectroscopy, 2021, 75, 947-956.	1.2	8
31	<i>In Situ</i> Fourier Transform Infrared Spectroscopic Imaging for Elucidating Variations in Chemical Structures of Polymer Composites at the Matrixâ€“Filler Interface during Reactive Processing. Macromolecules, 2020, 53, 10711-10717.	2.2	7
32	A study of molecular architectural dynamics of crosslinked urethane during photo-aging by two-dimensional infrared correlation spectroscopy. Polymer Degradation and Stability, 2020, 179, 109242.	2.7	7
33	Size- and Shape-Controlled Syntheses of Colloidal Sn, Te, and Bi Nanocrystals. Bulletin of the Chemical Society of Japan, 2013, 86, 642-650.	2.0	5
34	Three-way evolved gas analysis-mass spectrometry combined with principal component analysis (EGA-MS-PCA) to probe interfacial states between matrix and filler in poly(styrene-b-butadiene-b-styrene) (SBS) nanocomposites. Polymer Testing, 2021, 101, 107300.	2.3	5
35	Molecular-scale deformation of glass-fiber-reinforced polypropylene probed by rheo-optical Fourier transform infrared imaging combined with a two-trace two-dimensional correlation technique. Polymer, 2022, 241, 124536.	1.8	5
36	Biobased and mechanically stiff lignosulfonate/cationic-polyelectrolyte/sugar complexes with coexisting ionic and covalent crosslinks. Polymer Journal, 2021, 53, 1037-1045.	1.3	4

#	Article	IF	Citations
37	Rheo-optical Near-infrared (NIR) Analysis of Binary Amorphous Polymer Blend Consisting of Polyvinyl Chloride (PVC) and Polymethyl Methacrylate (PMMA). Analytical Sciences, 2021, 37, 1259-1264.	0.8	4
38	In-situ infrared cure monitoring combined with two-trace two-dimensional (2T2D) correlation analysis to elucidate the matrixâ€“filler interaction of nanocomposites: Case of thermosetting urethane/silica nanospheres. Polymer Testing, 2022, 112, 107587.	2.3	3
39	Aging of polypropylene probed by near infrared spectroscopy. Journal of Near Infrared Spectroscopy, 2021, 29, 259-268.	0.8	2
40	Direct Power Charge and Discharge Using the Glycolic Acid/Oxalic Acid Redox Couple toward Carbon-Neutral Energy Circulation. ECS Transactions, 2017, 75, 17-21.	0.3	1
41	Development of Low-Temperature Sintering Cu Nanoparticles. Materials Research Society Symposia Proceedings, 2013, 1513, 1.	0.1	0
42	Amorphous polyamide m â€xylylenediamineâ€adipic acidâ€isophthalic acid copolymer (MXD6I) : Evaluation of oxygen barrier property and free volume in high humidity condition. Polymers for Advanced Technologies, 0, , .	1.6	0