

Sungyul Lee

List of Publications by Year in descending order

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51
papers

1,420
citations

394421

19
h-index

330143

37
g-index

52
all docs

52
docs citations

52
times ranked

1251
citing authors

#	ARTICLE	IF	CITATIONS
1	A New Class of SN2 Reactions Catalyzed by Protic Solvents: A Facile Fluorination for Isotopic Labeling of Diagnostic Molecules. <i>Journal of the American Chemical Society</i> , 2006, 128, 16394-16397.	13.7	296
2	Hydrogen-bond promoted nucleophilic fluorination: concept, mechanism and applications in positron emission tomography. <i>Chemical Society Reviews</i> , 2016, 45, 4638-4650.	38.1	130
3	Organocatalytic Enantioselective Michael Addition of Malonic Acid Half Thioesters to Nitroolefins: From Mimicry of Polyketide Synthases to Scalable Synthesis of Amino Acids. <i>Advanced Synthesis and Catalysis</i> , 2011, 353, 3196-3202.	4.3	128
4	Bis-Terminal Hydroxy Polyethers as All-Purpose, Multifunctional Organic Promoters: A Mechanistic Investigation and Applications. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 7683-7686.	13.8	103
5	Effects of Microsolvation on the Structures and Reactions of Neutral and Zwitterion Alanine: A Computational Study. <i>Journal of Physical Chemistry B</i> , 2003, 107, 14109-14118.	2.6	76
6	Facile SN2 Reaction in Protic Solvent: A Quantum Chemical Analysis. <i>Journal of Physical Chemistry A</i> , 2007, 111, 10152-10161.	2.5	52
7	Structures and isomerization of neutral and zwitterion serine-water clusters: Computational study. <i>International Journal of Quantum Chemistry</i> , 2005, 101, 55-66.	2.0	40
8	Oligoethylene Glycols as Highly Efficient Multifunctional Promoters for Nucleophilic Substitution Reactions. <i>Chemistry - A European Journal</i> , 2012, 18, 3918-3924.	3.3	38
9	SN2 Fluorination reactions in ionic liquids: a mechanistic study towards solvent engineering. <i>Organic and Biomolecular Chemistry</i> , 2011, 9, 418-422.	2.8	37
10	Noncovalent Complexes of Cyclodextrin with Small Organic Molecules: Applications and Insights into Host-Guest Interactions in the Gas Phase and Condensed Phase. <i>Molecules</i> , 2020, 25, 4048.	3.8	30
11	Theory of diatomic photodissociation involving several atomic term limits: Quantum interference and product control in OH photodissociation. <i>Journal of Chemical Physics</i> , 1995, 103, 3501-3509.	3.0	27
12	Structure and stability of glycine (H2O)3 cluster and anion: Zwitterion vs. canonical glycine. <i>International Journal of Quantum Chemistry</i> , 2007, 107, 1316-1327.	2.0	27
13	Bis-tert-Alcohol-Functionalized Crown-Calix[4]arene: An Organic Promoter for Nucleophilic Fluorination. <i>Chemistry - A European Journal</i> , 2016, 22, 4515-4520.	3.3	27
14	Gas phase hydration of amino acids and dipeptides: effects on the relative stability of zwitterion vs. canonical conformers. <i>RSC Advances</i> , 2014, 4, 16352-16361.	3.6	26
15	Epitaxy-driven vertical growth of single-crystalline cobalt nanowire arrays by chemical vapor deposition. <i>Journal of Materials Chemistry C</i> , 2015, 3, 100-106.	5.5	26
16	Chiral differentiation of D- and L-isoleucine using permethylated β^2 -cyclodextrin: infrared multiple photon dissociation spectroscopy, ion-mobility mass spectrometry, and DFT calculations. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 30428-30436.	2.8	24
17	Chiral differentiation of D- and L-alanine by permethylated β^2 -cyclodextrin: IRMPD spectroscopy and DFT methods. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 14729-14737.	2.8	22
18	High resolution resonance enhanced two photon ionization spectroscopy of RbCs in a cold molecular beam. <i>Journal of Chemical Physics</i> , 2001, 114, 8926-8931.	3.0	20

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19	Design of Carbene-Based Organocatalysts for Nitrogen Fixation: Theoretical Study. <i>Journal of Chemical Theory and Computation</i> , 2012, 8, 1983-1988.	5.3	20
20	Organocatalysis of nucleophilic substitution reactions by the combined effects of two promoters fused in a molecule: oligoethylene glycol substituted imidazolium salts. <i>Tetrahedron</i> , 2014, 70, 533-542.	1.9	20
21	On the molecular phase in coherent control. <i>Journal of Chemical Physics</i> , 1997, 107, 2734-2737.	3.0	18
22	Phase lag near the resonances in (π , π) coherent control. <i>Journal of Chemical Physics</i> , 1998, 108, 3903-3908.	3.0	17
23	Selective production of photofragments by monitoring the shape of asymmetric resonances in OH photodissociation: Dependence on initial vibrational states. <i>Journal of Chemical Physics</i> , 1996, 104, 1912-1917.	3.0	16
24	Infrared multiple photon dissociation spectroscopy and density functional theory (DFT) studies of protonated permethylated β -cyclodextrin-water non-covalent complexes. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 8376.	2.8	16
25	A Mechanistic Study of SN2 Reaction in a Diol Solvent. <i>Journal of Physical Chemistry A</i> , 2009, 113, 3685-3689.	2.5	15
26	Ultrafast photodissociation assisted by strong non-resonant Stark effect: the "straddling" control pulse. <i>Journal of Modern Optics</i> , 2009, 56, 811-821.	1.3	11
27	Nucleophilic substitution reactions promoted by oligoethylene glycols: a mechanistic study of ion-pair S_N2 processes facilitated by Lewis base. <i>Journal of Physical Organic Chemistry</i> , 2013, 26, 9-14.	1.9	11
28	Structures and Bonding Properties of Gold-Arg-Cys Complexes: DFT Study of Simple Peptide-Coated Metal. <i>Journal of Physical Chemistry C</i> , 2014, 118, 20840-20847.	3.1	11
29	Mechanistic study of nucleophilic fluorination promoted by tri-tert-butanolamine. <i>Journal of Fluorine Chemistry</i> , 2017, 197, 80-86.	1.7	11
30	The Effects of Structural Modifications of Bis(tertiary alcohol)-functionalized Crown-Calix[4]arenes as Nucleophilic Fluorination Promoters and Relations with Computational Predictions. <i>European Journal of Organic Chemistry</i> , 2020, 2020, 728-735.	2.4	10
31	Mechanism of Nucleophilic Fluorination Facilitated by a Pyrene-tagged Ionic Liquids: Synergistic Effects of Pyrene-Metal Cation Interactions. <i>Bulletin of the Korean Chemical Society</i> , 2018, 39, 1047-1053.	1.9	8
32	Harnessing Ionic Interactions and Hydrogen Bonding for Nucleophilic Fluorination. <i>Molecules</i> , 2020, 25, 721.	3.8	8
33	Unveiling host-guest-solvent interactions in solution by identifying highly unstable host-guest configurations in thermal non-equilibrium gas phase. <i>Scientific Reports</i> , 2022, 12, 8169.	3.3	8
34	Control of reactivity and selectivity of guanidinyliodonium salts toward ^{18}F -Labeling by monitoring of protecting groups: Experiment and theory. <i>Journal of Fluorine Chemistry</i> , 2019, 227, 109387.	1.7	7
35	Control of vector properties in vibrationally mediated photodissociation near asymmetric resonances. <i>Journal of Chemical Physics</i> , 1997, 107, 1388-1393.	3.0	6
36	Atomistically observing real-space structure of composition modulated $(\text{Nb}_{0.94}\text{V}_{0.06})_{10}(\text{SixGe}_{1-x})_7$ nanowires with ultralow resistivity. <i>Journal of Materials Chemistry C</i> , 2013, 1, 1674.	5.5	5

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37	Thermodynamic and kinetic stability of zwitterionic histidine: Effects of gas phase hydration. <i>Chemical Physics Letters</i> , 2015, 637, 42-50.	2.6	5
38	Computational study of S_N2 reactions promoted by crown ether: Contact ion pair versus solvent-separated ion pair mechanism. <i>International Journal of Quantum Chemistry</i> , 2018, 118, e25547.	2.0	5
39	Origin of Difference in the Reactivity of Aliphatic and Aromatic Guanidine-containing Pharmaceuticals Toward $[^{18}F]$ Fluorination: Coulombic Forces and Hydrogen Bonding. <i>Bulletin of the Korean Chemical Society</i> , 2019, 40, 894-897.	1.9	5
40	Effects of the interactions between dissociative states and control of the product branching ratios in predissociation. <i>Journal of Chemical Physics</i> , 1996, 104, 7914-7920.	3.0	4
41	Quantum mechanical analysis of photofragment alignment near asymmetric resonances. <i>Journal of Chemical Physics</i> , 1996, 105, 10782-10787.	3.0	4
42	Inter- and Intra-Molecular Organocatalysis of S_N2 Fluorination by Crown Ether: Kinetics and Quantum Chemical Analysis. <i>Molecules</i> , 2021, 26, 2947.	3.8	4
43	Toward the Robust Synthesis of $[^{18}F]$ FDOPA: Quantum Chemical Analysis of S_NAr Cold Fluorination of Diaryl Iodonium Salt by $^{19}F^-$. <i>Bulletin of the Korean Chemical Society</i> , 2020, 41, 400-405.	1.9	3
44	Mechanistic study of nucleophilic fluorination for the synthesis of fluorine-18 labeled fluoroform with high molar activity from <i>N</i> -difluoromethyltriazolium triflate. <i>RSC Advances</i> , 2021, 11, 6099-6106.	3.6	3
45	Hydrogen Bonding in S_N2 Reactions Promoted or Inhibited by Ionic Liquids: Effects of Side Chain. <i>Bulletin of the Korean Chemical Society</i> , 2021, 42, 446-451.	1.9	3
46	Dual propagation inversion of truncated signals. <i>Theoretical Chemistry Accounts</i> , 2001, 105, 173-181.	1.4	2
47	Origin of Salt Effects in S_N2 Fluorination Using KF Promoted by Ionic Liquids: Quantum Chemical Analysis. <i>Molecules</i> , 2021, 26, 5738.	3.8	2
48	Kinetics and Quantum Chemical Analysis of Intramolecular S_N2 Reactions by Using Metal Salts and Promoted by Crown Ethers: Contact Ion Pair vs. Separated Nucleophile Mechanism. <i>ChemistrySelect</i> , 2022, 7, .	1.5	2
49	Predissociating resonances of Cs_2^+ Theory and experiment. <i>Zeitschrift Fur Elektrotechnik Und Elektrochemie</i> , 1997, 101, 407-413.	0.9	1
50	Enhancement of S_NAr reactions by $CH_3SO_3^-$ ionic liquid and organic solvent dimethylformamide as bifunctional organocatalysts: A mechanistic study. <i>Bulletin of the Korean Chemical Society</i> , 0, , .	1.9	1
51	Nucleophilic Radiofluorination Using Tri-tert-Butanol Ammonium as a Bifunctional Organocatalyst: Mechanism and Energetics. <i>Molecules</i> , 2022, 27, 1044.	3.8	1