Nobuyuki N Matsuzawa

List of Publications by Year
in descending order

76	2,096	236925	233421
papers	citations	25 h-index	45 g-index

76	76	76	1596
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Time-Dependent Density Functional Theory Calculations of Photoabsorption Spectra in the Vacuum Ultraviolet Region. Journal of Physical Chemistry A, 2001, 105, 4953-4962.	2.5	226
2	Semiempirical calculations of dihydrogenated buckminsterfullerenes, C60H2. The Journal of Physical Chemistry, 1992, 96, 7594-7604.	2.9	151
3	Semiempirical calculations of the polarizability and second-order hyperpolarizability of fullerenes (C60 and C70), and model aromatic compounds. The Journal of Physical Chemistry, 1992, 96, 6241-6247.	2.9	101
4	Plasmaâ€polymerized C60/C70mixture films: Electric conductivity and structure. Journal of Applied Physics, 1993, 74, 5790-5798.	2.5	100
5	Density Functional Study of the Structures and Nonlinear Optical Properties of Urea. The Journal of Physical Chemistry, 1994, 98, 3967-3977.	2.9	96
6	Density functional theory prediction of the second-order hyperpolarizability of metalloporphines. The Journal of Physical Chemistry, 1995, 99, 7698-7706.	2.9	89
7	Electronic structures of 1,2- and 1,4-C60X2n derivatives with n = 1, 2, 4, 6, 8, 10, 12, 18, 24, and 30. The Journal of Physical Chemistry, 1992, 96, 10747-10756.	2.9	84
8	Semiempirical calculations of hyperpolarizabilities for donor-acceptor molecules: comparison to experiment. The Journal of Physical Chemistry, 1992, 96, 6232-6241.	2.9	84
9	Density Functional Theory Predictions of Second-Order Hyperpolarizabilities of Metallocenes. Journal of Physical Chemistry A, 1997, 101, 9391-9398.	2.5	83
10	Vapor Sorption and Electrical Response of Au-Nanoparticleâ€“ Dendrimer Composites. Advanced Functional Materials, 2007, 17, 881-888.	14.9	72
11	Density functional theory predictions of polarizabilities and first- and second-order hyperpolarizabilities for molecular systems. The Journal of Physical Chemistry, 1994, 98, 2545-2554.	2.9	67
12	Patterns for addition to fullerene (C60). The Journal of Physical Chemistry, 1992, 96, 6107-6110.	2.9	61
13	Dimerization of C60: The Formation of Dumbbell-Shaped C120. The Journal of Physical Chemistry, 1994, 98, 2555-2563.	2.9	61
14	Local density functional calculations of the polarizability and second-order hyperpolarizability of fullerene-C60. The Journal of Physical Chemistry, 1992, 96, 6872-6875.	2.9	59
15	Semiempirical calculations of hyperpolarizabilities for extended ? systems: Polyenes, polyynes, and polyphenyls. International Journal of Quantum Chemistry, 1992, 44, 497-515.	2.0	50
16	Macrocyclic functional dyes: Applications to optical disk media, photochemical hole burning and non-linear optics. Pure and Applied Chemistry, 1996, 68, 1429-1434.	1.9	50
17	Theoretical Calculation of Photoabsorption of Various Polymers in an Extreme Ultraviolet Region. Japanese Journal of Applied Physics, 1999, 38, 7109-7113.	1.5	50
18	Conformational analysis of 1,2-dihaloethanes: a comparison of theoretical methods. The Journal of Physical Chemistry, 1992, 96, 10740-10746.	2.9	45

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19	Reduction of line edge roughness in the top surface imaging process. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1998, 16, 3739.	1.6	43
20	Addition of Aryl and Fluoroalkyl Radicals to Fullerene C70:Â ESR Detection of Five Regioisomeric Adducts and Density Functional Calculationsâ€. Journal of the American Chemical Society, 1996, 118, 7608-7617.	13.7	42
21	Semiempirical calculations of fullerene (C60) derivatives: addition to double bonds radiating from a five-membered ring. The Journal of Physical Chemistry, 1992, 96, 8317-8325.	2.9	31
22	Some well characterized chemical reactivities of buckminsterfullerene (C60). Carbon, 1992, 30, 1213-1226.	10.3	31
23	Theoretical estimation of absorption coefficients of various polymers at 13 nm. Microelectronic Engineering, 2000, 53, 671-674.	2.4	29
24	Light stability of a Î²-cyclodextrin inclusion complex of a cyanine dye. Journal of the Chemical Society, Faraday Transactions, 1994, 90, 3517-3520.	1.7	26
25	Prediction of the fundamental vibrational frequencies for C60 by local density functional theory. The Journal of Physical Chemistry, 1995, 99, 4486-4489.	2.9	26
26	Machine-Learning Guided Quantum Chemical and Molecular Dynamics Calculations to Design Novel Hole-Conducting Organic Materials. Journal of Physical Chemistry A, 2020, 124, 8330-8340.	2.5	25
27	Changes of chemical nature of photoresists induced by various plasma treatments and their impact on LWR. , 2006, , .		24
28	Theoretical Calculations of Coefficients of Friction between Weakly Interacting Surfaces. Journal of Physical Chemistry A, 1997, 101, 10045-10052.	2.5	20
29	Time-dependent density functional theory calculations of the photoabsorption of fluorinated alkanes. Journal of Fluorine Chemistry, 2003, 122, 27-35.	1.7	20
30	Bond energies in organofluorine systems: applications to TeflonÂ® and fullerenes. Journal of Fluorine Chemistry, 1995, 72, 209-214.	1.7	18
31	Theoretical calculations of photoabsorption of molecules in the vacuum ultraviolet region. , 2000, 3999, 375.		17
32	Theoretical Prediction of the Hyperpolarizabilities for 4-Aminoindoaniline. The Journal of Physical Chemistry, 1994, 98, 11677-11684.	2.9	14
33	A New Molecular Switch Based on Helical Biladienone. Advanced Materials, 2006, 18, 2523-2528.	21.0	14
34	Theoretical Estimation of Absorption Coefficients of Various Polymers at 13nm. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 1999, 12, 571-576.	0.3	13
35	De Novo Design of Molecules with Low Hole Reorganization Energy Based on a Quarter-Million Molecule DFT Screen. Journal of Physical Chemistry A, 2021, 125, 7331-7343.	2.5	12
36	Time-Dependent Density Functional Theory Calculations of Photoabsorption of Fluorinated Cyclic Molecules in the Vacuum Ultraviolet Region. Physica Status Solidi (B): Basic Research, 2001, 226, 69-77.	1.5	11

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37	Gold-nanoparticle-assisted oligonucleotide immobilisation for improved DNA detection. IET Nanobiotechnology, 2005, 152, 97.	2.1	10
38	Estimation of electron and hole mobility of 50 homogeneous fullerene amorphous structures (C60,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 2020, 78, 105571.	2.6	10
39	Massive Theoretical Screen of Hole Conducting Organic Materials in the Heteroacene Family by Using a Cloud-Computing Environment. Journal of Physical Chemistry A, 2020, 124, 1981-1992.	2.5	10
40	Structures of Carbon Deposits Formed on a Graphite Electrode during Fullerene Generation. Japanese Journal of Applied Physics, 1993, 32, 3549-3555.	1.5	9
41	Pattern collapse in the top surface imaging process after dry development. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1998, 16, 3744.	1.6	8
42	Theoretical calculations of photoabsorption of several alicyclic molecules in the vacuum ultraviolet region. , 2001, , .		8
43	Carbon Microfibers Grown on Graphite Electrode During Fullerene Generation Using Composite Graphite Rods. Japanese Journal of Applied Physics, 1994, 33, 4032-4038.	1.5	7
44	Density functional theory predictions of the nonlinear optical properties of molecules. Synthetic Metals, 1995, 71, 1667-1670.	3.9	7
45	Chemically Amplified Si-contained Resist Using Silsesquoxane for ArF Lithography (CASUAL) and its Application to Bi-Layer Resist Process.. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 1997, 10, 589-594.	0.3	7
46	Control of line edge roughness of ultrathin resist films subjected to EUV exposure. , 2001, , .		7
47	Improvement in gate LWR with plasma curing of ArF photoresists. Thin Solid Films, 2007, 515, 4928-4932.	1.8	7
48	Theoretical Study of the Conformation and Second-Order Hyperpolarizability of Substituted Phenylpolyacetylenes. The Journal of Physical Chemistry, 1994, 98, 11669-11676.	2.9	6
49	Resist cluster formation model and development simulation. , 1998, , .		6
50	Localized incorporation of lanthanum carbide crystals in carbon nanotubes. Advanced Materials, 1994, 6, 590-592.	21.0	5
51	Theoretical Studies of Dihydroxybuckminsterfullerene, C60(OH)2. The Journal of Physical Chemistry, 1995, 99, 9717-9723.	2.9	5
52	Diffusion Kinetic of Vapor-phase Silylation Process for ArF Lithography.. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 1997, 10, 603-608.	0.3	4
53	Sub-0.1-Âµm-Pattern Fabrication Using a 193-nm Top Surface Imaging (TSI) Process. Japanese Journal of Applied Physics, 1998, 37, 6734-6738.	1.5	4
54	Bilayer resists process for ArF lithography.. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 1998, 11, 667-672.	0.3	4

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55	Development of Resist Materials for EUVL.. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2000, 13, 385-389.	0.3	4
56	Optical Recording Characteristics of Dye/Polymer Systems. Japanese Journal of Applied Physics, 1990, 29, 1963-1966.	1.5	3
57	Theoretical Calculations of Sensitivity of Deprotection Reactions for Acrylic Polymers for 193 nm Lithography II: Protection Groups Containing an Adamantyl Unit. Japanese Journal of Applied Physics, 1998, 37, 5781-5785.	1.5	3
58	Theoretical calculations of sensitivity of deprotection reactions for acrylic polymers for 193 nm lithography. Journal of Materials Chemistry, 1998, 8, 853-858.	6.7	2
59	Theoretical and Experimental Study on the Silylation of Alcohol Units in ArF Lithography Resists.. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 1998, 11, 625-632.	0.3	2
60	Dissolution Rate Analysis of ArF Resists Based on the Percolation Model. Japanese Journal of Applied Physics, 1999, 38, 4033-4040.	1.5	2
61	<title>Theoretical calculations of photoabsorption of polymers in the EUV (extreme ultraviolet) region</title>. , 2001, , .		2
62	Optimization of dual BARC structures for hyper-NA immersion lithography. , 2006, , .		2
63	Effect of the Blending of Binder Polymers on Recording Sensitivity of Dye/Polymer Optical Recording Media. Japanese Journal of Applied Physics, 1991, 30, L1770-L1773.	1.5	1
64	Dissolution-rate analysis of ArF resist polymers based on the percolation model. , 1998, 3333, 601.		1
65	Theoretical calculations of silylation reaction of photoresists. , 1998, , .		1
66	Study of high photo-speed top surface imaging process using chemically amplified resist.. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 1998, 11, 613-618.	0.3	1
67	Prediction of resolution using wet-develop type single layer and dry-development process for EUV lithography. Microelectronic Engineering, 2000, 53, 689-692.	2.4	1
68	Numerical Investigations on Requirements for BARC Materials for Hyper NA Immersion Lithography. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2005, 18, 587-592.	0.3	1
69	Optimization of Dual-BARC Structures on Silicon Oxide and Nitride Layers to be Used for Hyper NA Immersion Lithography. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2006, 19, 633-640.	0.3	1
70	Hysteresis and ferroelectric liquid crystal displays. Liquid Crystals, 1997, 23, 589-596.	2.2	0
71	High-silicon-concentration TSI process for 193-nm lithography. , 1998, , .		0
72	Recent advantages of bilevel resists based on silsesquioxane for ArF lithography. , 1998, , .		0

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73	Sub 0.1-/spl mu/m Pattern Fabrication Using a 193-nm TSI Process. , 1998, , .		0
74	Theoretical estimation of photo-absorption of resist molecules in the EUV and VUV region. , 0, , .		0
75	Switches from <I>Ï€</I>- to <I>Ïƒ</I>-Bonding Complexes Controlled by Gate Voltages. Journal of Nanoscience and Nanotechnology, 2005, 5, 1755-1758.	0.9	0
76	Quantitative Evaluation of Line Width Roughness-Effect on Mosfet Electrical Properties Using a Large Array Test Structure. , 2007, , .		0