Oktay Sinanoglu

List of Publications by Year in descending order

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111	4,153	126708	123241
papers	citations	33 h-index	61 g-index

114	114	114	752
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Recent CI methods for the calculation of pair correlations and more-electron clusters in ground-state atoms. International Journal of Quantum Chemistry, 2009, 7, 57-63.	1.0	0
2	Charge densities and transition densities from the theory of non-closed-shell states and their experimental tests. International Journal of Quantum Chemistry, 2009, 9, 155-164.	1.0	2
3	Electron Correlation in Atoms and Molecules. Advances in Chemical Physics, 2007, , 237-282.	0.3	63
4	Intermolecular Forces in Liquids. Advances in Chemical Physics, 2007, , 283-326.	0.3	62
5	Many-Electron Theory of Atoms, Molecules and Their Interactions. Advances in Chemical Physics, 2007, , 315-412.	0.3	208
6	A Principal of Linear Covariance for Quantum Mechanics and Its Consequences Taking one Beyond Symmetry. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1997, 52, 46-48.	0.7	0
7	Dyad algebra and multiplication of graphs. I. Directed graphs. Journal of Mathematical Chemistry, 1993, 14, 185-194.	0.7	1
8	Dyad algebra and multiplication of graphs. II. Undirected graphs. Journal of Mathematical Chemistry, 1993, 14, 195-205.	0.7	0
9	Autocatalytic and other general networks for chemical mechanisms, pathways, and cycles: Their systematic and topological generation. Journal of Mathematical Chemistry, 1993, 12, 319-363.	0.7	4
10	Interactions between Molecules Adsorbed on a Surface. World Scientific Series in 20th Century Chemistry, 1993, , 493-502.	0.0	0
11	Nonorthogonality and theMO energy level patterns of molecules deduced directly from structural formulas by the newVIF method as compared with machine computations. International Journal of Quantum Chemistry, 1992, 44, 137-151.	1.0	0
12	Are oxygen rings (On) and their negative ions (On?) unstable?. International Journal of Quantum Chemistry, 1989, 36, 545-552.	1.0	2
13	The new pictorial structural covariance method for qualitative quantum chemistry. II: Arenes with or without polyene side chains and polyene bridges. Journal of Mathematical Chemistry, 1988, 2, 117-136.	0.7	3
14	The new pictorial structural covariance method for qualitative quantum chemistry. III: Fused polycyclics and their ions. Journal of Mathematical Chemistry, 1988, 2, 137-154.	0.7	2
15	Topological electronic rules for polycyclic hydrocarbons?quantum chemical deductions directly from structural formulas. International Journal of Quantum Chemistry, 1988, 34, 143-147.	1.0	1
16	Ten classes of bicyclo[p.q.0]pi-hydrocarbons, and their anions and cations. Electronic rules directly from structural formulas. Tetrahedron Letters, 1988, 29, 889-892.	0.7	11
17	New method for qualitative quantum chemical deductions on organic or inorganic molecules or clusters directly from structural formulas or ORTEP diagrams. Theoretica Chimica Acta, 1985, 68, 251-270.	0.9	15
18	The denaturation maxima of proteins and of drug-biomolecule complex formation in a wide range of methanol/water mixtures. Biophysical Chemistry, 1985, 21, 157-162.	1.5	24

#	Article	IF	Citations
19	Denaturation of proteins in methanol/water mixtures. Biophysical Chemistry, 1985, 21, 163-166.	1.5	20
20	Solvophobic forces and molecular surface area changes in drug-biomolecule associations as with actinomycin-deoxyguanosine in a wide range of methanol/water mixtures. Biophysical Chemistry, 1985, 21, 167-171.	1.5	12
21	Subordination of the fast-relaxing degree of freedom in the center manifold of the Belousov-Zhabotinsky system. Physical Review A, 1985, 31, 2736-2737.	1.0	5
22	A Reactive System with Diffusive Transport Displaying Two Different Symmetry-Breaking Dissipative Structures. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1985, 40, 611-618.	0.7	1
23	Locally attractive normal modes for chemical process. Journal of Mathematical Physics, 1984, 25, 2576-2581.	0.5	12
24	Conditions for the validity of Ginzburg-Landau equations in far-from-equilibrium kinetics. Physical Review A, 1984, 30, 1522-1524.	1.0	10
25	Symmetry-breaking instabilities under nonclassical bifurcation conditions. Physical Review A, 1984, 29, 2029-2032.	1.0	14
26	Global attractors and global stability for closed chemical systems. Journal of Mathematical Physics, 1984, 25, 406-409.	0.5	9
27	Spatial-temporal dissipative structures arising in open reactive systems with a negative feedback loop. BioSystems, 1984, 17, 3-9.	0.9	1
28	A theorem for qualitative deductions in organic or inorganic chemistry regarding the relative stabilities, distortions and reactions of molecules. Chemical Physics Letters, 1984, 103, 315-322.	1.2	19
29	A principle of linear covariance for quantum mechanics and the electronic structure theory of molecules and other atom clusters. Theoretica Chimica Acta, 1984, 65, 233-242.	0.9	13
30	On the algebraic construction of chemistry from quantum mechanics. A fundamental valency vector field defined on the euclidean 3-space and its relation to the Hilbert space. Theoretica Chimica Acta, 1984, 65, 243-248.	0.9	7
31	Non-unitary classification of molecular electronic structures and other atom clusters. Theoretica Chimica Acta, 1984, 65, 249-254.	0.9	5
32	Structural covariance of graphs. Theoretica Chimica Acta, 1984, 65, 255-265.	0.9	19
33	Deformational covariance of graphs. Theoretica Chimica Acta, 1984, 65, 267-270.	0.9	3
34	Hamiltonian as a Hessian on the Hibert space, eigenvectors as critical points, and their relation to topological invariants in the variation method. Theoretica Chimica Acta, 1984, 65, 271-278.	0.9	1
35	The structural stability restriction rules out certain frontside S N 2 pathways. Theoretica Chimica Acta, 1984, 66, 147-149.	0.9	6
36	Directed graphs of structurally stable potential energy surfaces representing a-priori reaction pathways. Theoretica Chimica Acta, 1984, 65, 179-190.	0.9	11

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37	The lifting of an Ä°nÃ¶nÃ¼â€“Wigner contraction at the level of universal coverings. Journal of Mathematical Physics, 1982, 23, 2234-2235.	0.5	0
38	Microscopic surface tension down to molecular dimensions and microthermodynamic surface areas of molecules or clusters. Journal of Chemical Physics, 1981, 75, 463-468.	1.2	91
39	Reaction Mechanisms and Chemical Networks â€" Types of Elementary Steps and Generation of Laminar Mechanisms*. Zeitschrift Fur Physikalische Chemie, 1981, 125, 129-160.	1.4	7
40	What size cluster is like a surface?. Chemical Physics Letters, 1981, 81, 188-190.	1.2	39
41	1â€•and 2â€topology of reaction networks. Journal of Mathematical Physics, 1981, 22, 1504-1512.	0.5	18
42	The solvophobic theory for the prediction of molecular conformations and biopolymer bindings in solutions with recent direct experimental tests. International Journal of Quantum Chemistry, 1980, 18, 381-392.	1.0	50
43	The metric geometry of near equilibrium irreversible thermodynamics. Journal of Chemical Physics, 1980, 72, 3127-3129.	1.2	0
44	Finding the possible mechanisms for a given type of overall reaction. Theoretica Chimica Acta, 1979, 51, 1-9.	0.9	7
45	Finding all possiblea priori mechanisms for a given type of overall reaction. Theoretica Chimica Acta, 1978, 48, 287-299.	0.9	14
46	Reply to "Comment on `Theory of atomic structures including electron correlation. V.'". Physical Review A, 1978, 18, 1313-1317.	1.0	1
47	Theory of atomic structures including electron correlation. V. Excited states not lowest of their symmetry and oscillator strengths in neutral and singly ionized atoms. Physical Review A, 1976, 13, 1293-1306.	1.0	22
48	Non-closed-shell many-electron-theory atomic charge wavefunctions. Atomic Data and Nuclear Data Tables, 1976, 18, 525-585.	0.9	17
49	Oscillator strengths for transitions involving excited states not lowest of their symmetry oxygen I and oxygen II transitions. Journal of Chemical Physics, 1976, 64, 1495-1497.	1.2	26
50	Predicted lifetimes, oscillator strengths, and wavelengths of highly ionized manyâ€electron heavy atoms (P XI to Sn XLVI), with both relativistic and correlation effects. Journal of Chemical Physics, 1976, 64, 4197-4204.	1.2	10
51	Theoretical Oscillator Strengths of Neutral, Singly-Ionized, and Multiply-Ionized Atoms. Topics in Current Physics, 1976, , 111-146.	0.5	7
52	The large effects of electron correlation on the multiplet generalized oscillator strengths of non-closed shell systems: Be 1s22s21S â†' 1s22s2p 1P0 and B 1s22s22p 2p0 â†' 1s22s2p22D. Chemical Physics Letters, 1975, 32, 449-454.	1.2	14
53	Multiplet generalized oscillator strengths and inelastic scattering cross sections calculated including the electron correlation effects: Transitions of neutral atoms: Be, B, C, N, and O. Journal of Chemical Physics, 1975, 62, 3664.	1.2	16
54	Theory of chemical reaction networks. All possible mechanisms or synthetic pathways with given number of reaction steps or species. Journal of the American Chemical Society, 1975, 97, 2309-2320.	6.6	52

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55	Comparison of doubly-excited helium energy levels, isoelectronic series, autoionization lifetimes, and group-theoretical configuration-mixing predictions with large-configuration-interaction calculations and experimental spectra. Physical Review A, 1975, 11, 97-110.	1.0	433
56	Group theoretic prediction of configuration mixing effects due to Coulomb repulsions in atoms with applications to doublyâ€excited spectra. Journal of Chemical Physics, 1975, 62, 886-892.	1.2	152
57	Electron correlation in excited states and term splittings in the carbonâ€ isoelectronic sequence. Journal of Chemical Physics, 1974, 61, 3670-3675.	1.2	14
58	New theoretical transition probabilities for the Si I 3s23p23pP â€" 3s3p33D0 isoelectronic sequence including the important correlation effects. Chemical Physics Letters, 1974, 24, 20-21.	1.2	16
59	The C-potential surface for predicting conformations of molecules in solution. Theoretica Chimica Acta, 1974, 33, 279-284.	0.9	39
60	Crucial role of electron correlation in both the upper and lower states in optical transitions. Theoretica Chimica Acta, 1974, 34, 183-187.	0.9	5
61	Theory of Intravalency and Rydberg Transitions in Molecules. , 1974, , 337-384.		7
62	A proposed correction to the solar abundances of carbon and oxygen utilizing new and accurate theoretical forbidden transition probabilities. Solar Physics, 1973, 29, 17-22.	1.0	4
63	Correlation effects in the neutral and ionized ground states of acetylene. Theoretica Chimica Acta, 1973, 30, 177-190.	0.9	16
64	Spin-free wave functions in many-electron perturbation theory. I. Closed-shell systems. International Journal of Quantum Chemistry, 1973, 7, 1145-1158.	1.0	3
65	Spin-free wave functions in many-electron perturbation theory. II. Systems with one nonclosed shell. International Journal of Quantum Chemistry, 1973, 7, 1159-1174.	1.0	2
66	Electronic quadrupole moments of excited states and the charge wavefunction of the many-electron theory. Chemical Physics Letters, 1973, 21, 247-250.	1.2	12
67	HFS constants of Be I 1s22s2p 3p0, B I 1s22s2p24P and B I 1s22s2p22D obtained from the non-closed shell many-electron theory for excited states. Chemical Physics Letters, 1973, 20, 221-224.	1.2	17
68	Relativistic effects in transitions of highly ionized heavy atoms. Chemical Physics Letters, 1973, 20, 407-410.	1.2	11
69	Prediction of molecular excited state properties, potential energy curves, and the non-closed shell many-electron theory. Journal of Molecular Structure, 1973, 19, 81-91.	1.8	16
70	Beam-foil spectroscopy and new atomic structure theory with a survey of results since 1970. Nuclear Instruments & Methods, 1973, 110, 193-209.	1.2	69
71	Estimation of binding energies of molecules by a semiempirical molecular orbital electron correlation method with applications to saturated and unsaturated hydrocarbons, aromatics, and heterocyclics. Journal of the American Chemical Society, 1973, 95, 5435-5442.	6.6	45
72	Remarks on dynamical and noncompact groups in physics and chemistry. International Journal of Quantum Chemistry, 1973, 7, 45-52.	1.0	0

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73	On the agreement between dipole length and dipole velocity calculated oscillator strengths. International Journal of Quantum Chemistry, 1973, 7, 65-67.	1.0	1
74	Resonance Transition Probabilities for Third-Row Atoms and Ions (Mgi, Siii-iii, Pii, Piv, Sii-iii, Cliii) Including the Important Correlation Effects. Physical Review Letters, 1972, 28, 945-948.	2.9	45
75	Intermolecular Forces in Liquids: Comparison of the Analytic Effective Potential with Computer Calculations of the Many-Body Effects. Physical Review A, 1972, 5, 2223-2229.	1.0	2
76	Algebra of the Noncompact GroupO(3,Â2)and the Hydrogen-Atom Radial Functions. Physical Review A, 1972, 5, 2309-2313.	1.0	21
77	Theory of Atomic Structure Including Electron Correlation. IV. Method for Forbidden-Transition Probabilities with Results for [O I], [O II], [O III], [N I], [N II], and [C I].. Physical Review A, 1971, 4, 1400-1410.	1.0	85
78	Theory of Atomic Structure Including Electron Correlation. II. All-External Pair Correlations in the Various States and Ions of B, C, N, O, F, Ne, and Na, and Prediction of Electron Affinities and Atomic Excitation Energies. Physical Review, 1969, 181, 54-65.	2.7	112
79	Theory of Atomic Structure Including Electron Correlation. I. Three Kinds of Correlation in Ground and Excited Configurations. Physical Review, 1969, 181, 42-53.	2.7	209
80	The GroupR4in Atomic-Structure Theory: The HydrogenicR4versus the MathematicalR4and the Coulomb Interaction in2sm2pnand3sm3pn3drConfigurations. Physical Review, 1969, 177, 77-85.	2.7	32
81	Theory of Atomic Structure Including Electron Correlation. III. Calculations of Multiplet Oscillator Strengths and Comparisons with Experiments for CII, NI, NII, NIII, OII, OIII, OIV, FII, NeII, and NaIII. Physical Review, 1969, 183, 56-68.	2.7	121
82	Expansion of the Density Matrix of an Nâ€Fermion System in Terms of the Correlation Densities of Fermion Clusters. Journal of Mathematical Physics, 1969, 10, 1032-1037.	0.5	4
83	Nontransferable Correlation Effects and Multiplet Oscillator Strengths for Electric Dipole Transitions in Atoms with Results on C ii, N i, N ii, N III, O ii, O III, O iv, F ii, and NE II. Astrophysical Journal, 1969, 157, 997.	1.6	16
84	Correlations between tetrahedrally localized orbitals. Chemical Physics Letters, 1968, 1, 699-702.	1.2	20
85	Upper and lower bounds and the generalized variation-perturbation approach of many-electron theory. International Journal of Quantum Chemistry, 1968, 2, 397-403.	1.0	7
86	Mediumâ€Dependent Intermolecular Potential for Liquids and Its Use in Obtaining Free Energy and Entropy. Journal of Chemical Physics, 1968, 49, 996-1000.	1.2	11
87	Theory of Atomic Structure Including Electron Correlation. Physical Review Letters, 1968, 21, 507-511.	2.9	73
88	Semiempirical Method for the Determination of Localized Orbitals in Molecules. Journal of Chemical Physics, 1968, 49, 65-71.	1.2	91
89	Symmetry Properties of Oneâ€•and Twoâ€Electron Correlation Functions in the Manyâ€Electron Theory of Atoms and Molecules. Journal of Chemical Physics, 1967, 46, 854-859.	1.2	13
90	An intermolecular potential for use in liquids. Chemical Physics Letters, 1967, 1, 340-342.	1.2	50

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91	Theoretical Transition Probabilities. Journal of Chemical Physics, 1966, 44, 1888-1898.	1.2	47
92	Manyâ€Electron Theory of Nonclosedâ€Shell Atoms and Molecules. II. Variational Theory. Journal of Chemical Physics, 1966, 44, 3608-3617.	1.2	100
93	Quantum Numbers and Masses of Mesons as Quark-Antiquark Systems. Physical Review Letters, 1966, 16, 207-210.	2.9	9
94	Intermolecularâ€Potentialâ€Energy Curvesâ€"Theory and Calculations on the Heliumâ€"Helium Potential. Journal of Chemical Physics, 1966, 45, 194-207.	1.2	61
95	Manyâ€Electron Theory of Nonclosedâ€Shell Atoms and Molecules. I. Orbital Wavefunction and Perturbation Theory. Journal of Chemical Physics, 1966, 44, 1899-1907.	1.2	199
96	Meson Spectrum, Mass Formula, and the Quark-Antiquark Interaction. Physical Review, 1966, 145, 1205-1211.	2.7	9
97	Sigma and Pi Changes in Valence States of Piâ€Electron Theory and Oneâ€Center Coulomb Repulsion Parameters. Journal of Chemical Physics, 1965, 43, 49-58.	1.2	60
98	Manyâ€Electron Theory of Atoms and Molecules. III. Effect of Correlation on Orbitals. Journal of Chemical Physics, 1963, 38, 1740-1748.	1.2	71
99	A Method for the Analysis of Many-Electron Wave Functions. Reviews of Modern Physics, 1963, 35, 517-519.	16.4	40
100	Effective Intermolecular Pair Potentials in Nonpolar Media. Journal of Chemical Physics, 1963, 38, 1730-1739.	1.2	71
101	Bonds and Intramolecular Forces. Journal of Chemical Physics, 1962, 37, 191-192.	1.2	27
102	SOME ASPECTS OF THE QUANTUM THEORY OF ATOMS, MOLECULES, AND THEIR INTERACTIONS. The Journal of Physical Chemistry, 1962, 66, 2283-2287.	2.9	16
103	Manyâ€Electron Theory of Atoms and Molecules. II. Journal of Chemical Physics, 1962, 36, 3198-3208.	1.2	194
104	Variation-Perturbation Method for Excited States. Physical Review, 1961, 122, 491-492.	2.7	50
105	Relation of Perturbation Theory to Variation Method. Journal of Chemical Physics, 1961, 34, 1237-1240.	1.2	41
106	Perturbation Theory of Many-Electron Atoms and Molecules. Physical Review, 1961, 122, 493-499.	2.7	75
107	Core Polarization in Li2. Journal of Chemical Physics, 1961, 34, 1078-1079.	1.2	14
108	Interâ€•and Intraâ€Atomic Correlation Energies and Theory of Coreâ€Polarization. Journal of Chemical Physics, 1960, 33, 1212-1226.	1.2	81

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109	Ligandâ€Field Theory of Linear Gaseous Molecules Involving the First Transition Series Elements. Journal of Chemical Physics, 1960, 32, 1082-1087.	1.2	42
110	Interactions between Molecules Adsorbed on a Surface. Journal of Chemical Physics, 1960, 32, 1279-1288.	1.2	204
111	Theoretical Preâ€Exponential Rate Factors for Abstraction Reactions. Journal of Chemical Physics, 1959, 30, 422-427.	1.2	11