

# Oktaý Sinanođlu

## List of Publications by Year in descending order

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111  
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4,153  
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126708

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114  
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114  
docs citations

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times ranked

752  
citing authors

#	ARTICLE	IF	CITATIONS
1	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. <i>Physical Review A</i> , 1975, 11, 97-110.	1.0	433
2	Theory of Atomic Structure Including Electron Correlation. I. Three Kinds of Correlation in Ground and Excited Configurations. <i>Physical Review</i> , 1969, 181, 42-53.	2.7	209
3	Many-Electron Theory of Atoms, Molecules and Their Interactions. <i>Advances in Chemical Physics</i> , 2007, , 315-412.	0.3	208
4	Interactions between Molecules Adsorbed on a Surface. <i>Journal of Chemical Physics</i> , 1960, 32, 1279-1288.	1.2	204
5	Many-Electron Theory of Nonclosed-Shell Atoms and Molecules. I. Orbital Wavefunction and Perturbation Theory. <i>Journal of Chemical Physics</i> , 1966, 44, 1899-1907.	1.2	199
6	Many-Electron Theory of Atoms and Molecules. II. <i>Journal of Chemical Physics</i> , 1962, 36, 3198-3208.	1.2	194
7	Group theoretic prediction of configuration mixing effects due to Coulomb repulsions in atoms with applications to doubly-excited spectra. <i>Journal of Chemical Physics</i> , 1975, 62, 886-892.	1.2	152
8	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. <i>Physical Review</i> , 1969, 183, 56-68.	2.7	121
9	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. <i>Physical Review</i> , 1969, 181, 54-65.	2.7	112
10	Many-Electron Theory of Nonclosed-Shell Atoms and Molecules. II. Variational Theory. <i>Journal of Chemical Physics</i> , 1966, 44, 3608-3617.	1.2	100
11	Semiempirical Method for the Determination of Localized Orbitals in Molecules. <i>Journal of Chemical Physics</i> , 1968, 49, 65-71.	1.2	91
12	Microscopic surface tension down to molecular dimensions and microthermodynamic surface areas of molecules or clusters. <i>Journal of Chemical Physics</i> , 1981, 75, 463-468.	1.2	91
13	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].. <i>Physical Review A</i> , 1971, 4, 1400-1410.	1.0	85
14	Inter- and Intra-Atomic Correlation Energies and Theory of Core-Polarization. <i>Journal of Chemical Physics</i> , 1960, 33, 1212-1226.	1.2	81
15	Perturbation Theory of Many-Electron Atoms and Molecules. <i>Physical Review</i> , 1961, 122, 493-499.	2.7	75
16	Theory of Atomic Structure Including Electron Correlation. <i>Physical Review Letters</i> , 1968, 21, 507-511.	2.9	73
17	Many-Electron Theory of Atoms and Molecules. III. Effect of Correlation on Orbitals. <i>Journal of Chemical Physics</i> , 1963, 38, 1740-1748.	1.2	71
18	Effective Intermolecular Pair Potentials in Nonpolar Media. <i>Journal of Chemical Physics</i> , 1963, 38, 1730-1739.	1.2	71

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19	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
20	Electron Correlation in Atoms and Molecules. Advances in Chemical Physics, 2007, , 237-282.	0.3	63
21	Intermolecular Forces in Liquids. Advances in Chemical Physics, 2007, , 283-326.	0.3	62
22	Intermolecular "Potential Energy Curves" Theory and Calculations on the Helium "Helium Potential. Journal of Chemical Physics, 1966, 45, 194-207.	1.2	61
23	Sigma and Pi Changes in Valence States of Pi "Electron Theory and One "Center Coulomb Repulsion Parameters. Journal of Chemical Physics, 1965, 43, 49-58.	1.2	60
24	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
25	Variation-Perturbation Method for Excited States. Physical Review, 1961, 122, 491-492.	2.7	50
26	An intermolecular potential for use in liquids. Chemical Physics Letters, 1967, 1, 340-342.	1.2	50
27	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
28	Theoretical Transition Probabilities. Journal of Chemical Physics, 1966, 44, 1888-1898.	1.2	47
29	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
30	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
31	Ligand "Field Theory of Linear Gaseous Molecules Involving the First Transition Series Elements. Journal of Chemical Physics, 1960, 32, 1082-1087.	1.2	42
32	Relation of Perturbation Theory to Variation Method. Journal of Chemical Physics, 1961, 34, 1237-1240.	1.2	41
33	A Method for the Analysis of Many-Electron Wave Functions. Reviews of Modern Physics, 1963, 35, 517-519.	16.4	40
34	The C-potential surface for predicting conformations of molecules in solution. Theoretica Chimica Acta, 1974, 33, 279-284.	0.9	39
35	What size cluster is like a surface?. Chemical Physics Letters, 1981, 81, 188-190.	1.2	39
36	The Group R4 in Atomic-Structure Theory: The Hydrogenic R4 versus the Mathematical R4 and the Coulomb Interaction in 2sm2pn and 3sm3pn3dr Configurations. Physical Review, 1969, 177, 77-85.	2.7	32

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37	Bonds and Intramolecular Forces. Journal of Chemical Physics, 1962, 37, 191-192.	1.2	27
38	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
39	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
40	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
41	Algebra of the Noncompact Group $O(3, \mathbb{R})$ and the Hydrogen-Atom Radial Functions. Physical Review A, 1972, 5, 2309-2313.	1.0	21
42	Correlations between tetrahedrally localized orbitals. Chemical Physics Letters, 1968, 1, 699-702.	1.2	20
43	Denaturation of proteins in methanol/water mixtures. Biophysical Chemistry, 1985, 21, 163-166.	1.5	20
44	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
45	Structural covariance of graphs. Theoretica Chimica Acta, 1984, 65, 255-265.	0.9	19
46	1 $\pi$ and 2 $\pi$ topology of reaction networks. Journal of Mathematical Physics, 1981, 22, 1504-1512.	0.5	18
47	HFS constants of Be I 1s2s2p 3p0, B I 1s2s2p2P and B I 1s2s2p2D obtained from the non-closed shell many-electron theory for excited states. Chemical Physics Letters, 1973, 20, 221-224.	1.2	17
48	Non-closed-shell many-electron-theory atomic charge wavefunctions. Atomic Data and Nuclear Data Tables, 1976, 18, 525-585.	0.9	17
49	SOME ASPECTS OF THE QUANTUM THEORY OF ATOMS, MOLECULES, AND THEIR INTERACTIONS. The Journal of Physical Chemistry, 1962, 66, 2283-2287.	2.9	16
50	Correlation effects in the neutral and ionized ground states of acetylene. Theoretica Chimica Acta, 1973, 30, 177-190.	0.9	16
51	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
52	New theoretical transition probabilities for the Si I 3s23p23pP $\rightarrow$ 3s3p33D0 isoelectronic sequence including the important correlation effects. Chemical Physics Letters, 1974, 24, 20-21.	1.2	16
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	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

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55	New method for qualitative quantum chemical deductions on organic or inorganic molecules or clusters directly from structural formulas or ORTEP diagrams. <i>Theoretica Chimica Acta</i> , 1985, 68, 251-270.	0.9	15
56	Core Polarization in Li <sub>2</sub> . <i>Journal of Chemical Physics</i> , 1961, 34, 1078-1079.	1.2	14
57	Electron correlation in excited states and term splittings in the carbon isoelectronic sequence. <i>Journal of Chemical Physics</i> , 1974, 61, 3670-3675.	1.2	14
58	The large effects of electron correlation on the multiplet generalized oscillator strengths of non-closed shell systems: Be 1s2s21S $\hat{+}$ 1s2s2p 1P0 and B 1s2s2p 2p0 $\hat{+}$ 1s2s2p2D. <i>Chemical Physics Letters</i> , 1975, 32, 449-454.	1.2	14
59	Finding all possible a priori mechanisms for a given type of overall reaction. <i>Theoretica Chimica Acta</i> , 1978, 48, 287-299.	0.9	14
60	Symmetry-breaking instabilities under nonclassical bifurcation conditions. <i>Physical Review A</i> , 1984, 29, 2029-2032.	1.0	14
61	Symmetry Properties of One- and Two-Electron Correlation Functions in the Many-Electron Theory of Atoms and Molecules. <i>Journal of Chemical Physics</i> , 1967, 46, 854-859.	1.2	13
62	A principle of linear covariance for quantum mechanics and the electronic structure theory of molecules and other atom clusters. <i>Theoretica Chimica Acta</i> , 1984, 65, 233-242.	0.9	13
63	Electronic quadrupole moments of excited states and the charge wavefunction of the many-electron theory. <i>Chemical Physics Letters</i> , 1973, 21, 247-250.	1.2	12
64	Locally attractive normal modes for chemical process. <i>Journal of Mathematical Physics</i> , 1984, 25, 2576-2581.	0.5	12
65	Solvophobic forces and molecular surface area changes in drug-biomolecule associations as with actinomycin-deoxyguanosine in a wide range of methanol/water mixtures. <i>Biophysical Chemistry</i> , 1985, 21, 167-171.	1.5	12
66	Theoretical Pre-Exponential Rate Factors for Abstraction Reactions. <i>Journal of Chemical Physics</i> , 1959, 30, 422-427.	1.2	11
67	Medium-Dependent Intermolecular Potential for Liquids and Its Use in Obtaining Free Energy and Entropy. <i>Journal of Chemical Physics</i> , 1968, 49, 996-1000.	1.2	11
68	Relativistic effects in transitions of highly ionized heavy atoms. <i>Chemical Physics Letters</i> , 1973, 20, 407-410.	1.2	11
69	Directed graphs of structurally stable potential energy surfaces representing a-priori reaction pathways. <i>Theoretica Chimica Acta</i> , 1984, 65, 179-190.	0.9	11
70	Ten classes of bicyclo[p.q.0]pi-hydrocarbons, and their anions and cations. Electronic rules directly from structural formulas. <i>Tetrahedron Letters</i> , 1988, 29, 889-892.	0.7	11
71	Predicted lifetimes, oscillator strengths, and wavelengths of highly ionized many-electron heavy atoms (P XI to Sn XLVI), with both relativistic and correlation effects. <i>Journal of Chemical Physics</i> , 1976, 64, 4197-4204.	1.2	10
72	Conditions for the validity of Ginzburg-Landau equations in far-from-equilibrium kinetics. <i>Physical Review A</i> , 1984, 30, 1522-1524.	1.0	10

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73	Quantum Numbers and Masses of Mesons as Quark-Antiquark Systems. <i>Physical Review Letters</i> , 1966, 16, 207-210.	2.9	9
74	Meson Spectrum, Mass Formula, and the Quark-Antiquark Interaction. <i>Physical Review</i> , 1966, 145, 1205-1211.	2.7	9
75	Global attractors and global stability for closed chemical systems. <i>Journal of Mathematical Physics</i> , 1984, 25, 406-409.	0.5	9
76	Upper and lower bounds and the generalized variation-perturbation approach of many-electron theory. <i>International Journal of Quantum Chemistry</i> , 1968, 2, 397-403.	1.0	7
77	Finding the possible mechanisms for a given type of overall reaction. <i>Theoretica Chimica Acta</i> , 1979, 51, 1-9.	0.9	7
78	Reaction Mechanisms and Chemical Networks – Types of Elementary Steps and Generation of Laminar Mechanisms*. <i>Zeitschrift Fur Physikalische Chemie</i> , 1981, 125, 129-160.	1.4	7
79	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. <i>Theoretica Chimica Acta</i> , 1984, 65, 243-248.	0.9	7
80	Theoretical Oscillator Strengths of Neutral, Singly-Ionized, and Multiply-Ionized Atoms. <i>Topics in Current Physics</i> , 1976, , 111-146.	0.5	7
81	Theory of Intravalency and Rydberg Transitions in Molecules. , 1974, , 337-384.		7
82	The structural stability restriction rules out certain frontside S N 2 pathways. <i>Theoretica Chimica Acta</i> , 1984, 66, 147-149.	0.9	6
83	Crucial role of electron correlation in both the upper and lower states in optical transitions. <i>Theoretica Chimica Acta</i> , 1974, 34, 183-187.	0.9	5
84	Non-unitary classification of molecular electronic structures and other atom clusters. <i>Theoretica Chimica Acta</i> , 1984, 65, 249-254.	0.9	5
85	Subordination of the fast-relaxing degree of freedom in the center manifold of the Belousov-Zhabotinsky system. <i>Physical Review A</i> , 1985, 31, 2736-2737.	1.0	5
86	Expansion of the Density Matrix of an N-fermion System in Terms of the Correlation Densities of Fermion Clusters. <i>Journal of Mathematical Physics</i> , 1969, 10, 1032-1037.	0.5	4
87	A proposed correction to the solar abundances of carbon and oxygen utilizing new and accurate theoretical forbidden transition probabilities. <i>Solar Physics</i> , 1973, 29, 17-22.	1.0	4
88	Autocatalytic and other general networks for chemical mechanisms, pathways, and cycles: Their systematic and topological generation. <i>Journal of Mathematical Chemistry</i> , 1993, 12, 319-363.	0.7	4
89	Spin-free wave functions in many-electron perturbation theory. I. Closed-shell systems. <i>International Journal of Quantum Chemistry</i> , 1973, 7, 1145-1158.	1.0	3
90	Deformational covariance of graphs. <i>Theoretica Chimica Acta</i> , 1984, 65, 267-270.	0.9	3

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91	The new pictorial structural covariance method for qualitative quantum chemistry. II: Arenes with or without polyene side chains and polyene bridges. <i>Journal of Mathematical Chemistry</i> , 1988, 2, 117-136.	0.7	3
92	Intermolecular Forces in Liquids: Comparison of the Analytic Effective Potential with Computer Calculations of the Many-Body Effects. <i>Physical Review A</i> , 1972, 5, 2223-2229.	1.0	2
93	Spin-free wave functions in many-electron perturbation theory. II. Systems with one nonclosed shell. <i>International Journal of Quantum Chemistry</i> , 1973, 7, 1159-1174.	1.0	2
94	The new pictorial structural covariance method for qualitative quantum chemistry. III: Fused polycyclics and their ions. <i>Journal of Mathematical Chemistry</i> , 1988, 2, 137-154.	0.7	2
95	Are oxygen rings (On) and their negative ions (On <sup>-</sup> ) unstable?. <i>International Journal of Quantum Chemistry</i> , 1989, 36, 545-552.	1.0	2
96	Charge densities and transition densities from the theory of non-closed-shell states and their experimental tests. <i>International Journal of Quantum Chemistry</i> , 2009, 9, 155-164.	1.0	2
97	Reply to "Comment on `Theory of atomic structures including electron correlation. V.'" . <i>Physical Review A</i> , 1978, 18, 1313-1317.	1.0	1
98	Spatial-temporal dissipative structures arising in open reactive systems with a negative feedback loop. <i>BioSystems</i> , 1984, 17, 3-9.	0.9	1
99	Hamiltonian as a Hessian on the Hilbert space, eigenvectors as critical points, and their relation to topological invariants in the variation method. <i>Theoretica Chimica Acta</i> , 1984, 65, 271-278.	0.9	1
100	Topological electronic rules for polycyclic hydrocarbons? quantum chemical deductions directly from structural formulas. <i>International Journal of Quantum Chemistry</i> , 1988, 34, 143-147.	1.0	1
101	Dyad algebra and multiplication of graphs. I. Directed graphs. <i>Journal of Mathematical Chemistry</i> , 1993, 14, 185-194.	0.7	1
102	On the agreement between dipole length and dipole velocity calculated oscillator strengths. <i>International Journal of Quantum Chemistry</i> , 1973, 7, 65-67.	1.0	1
103	A Reactive System with Diffusive Transport Displaying Two Different Symmetry-Breaking Dissipative Structures. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1985, 40, 611-618.	0.7	1
104	The metric geometry of near equilibrium irreversible thermodynamics. <i>Journal of Chemical Physics</i> , 1980, 72, 3127-3129.	1.2	0
105	The lifting of an "Wigner contraction at the level of universal coverings. <i>Journal of Mathematical Physics</i> , 1982, 23, 2234-2235.	0.5	0
106	Nonorthogonality and the MO energy level patterns of molecules deduced directly from structural formulas by the new VIF method as compared with machine computations. <i>International Journal of Quantum Chemistry</i> , 1992, 44, 137-151.	1.0	0
107	Dyad algebra and multiplication of graphs. II. Undirected graphs. <i>Journal of Mathematical Chemistry</i> , 1993, 14, 195-205.	0.7	0
108	Interactions between Molecules Adsorbed on a Surface. <i>World Scientific Series in 20th Century Chemistry</i> , 1993, , 493-502.	0.0	0

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109	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
110	Remarks on dynamical and noncompact groups in physics and chemistry. International Journal of Quantum Chemistry, 1973, 7, 45-52.	1.0	0
111	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