

# Kalidas Sen

## List of Publications by Year in descending order

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times ranked

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#	ARTICLE	IF	CITATIONS
1	Complexity of HCl and H <sub>2</sub> molecules under q-deformed Morse potential. Indian Journal of Physics, 2022, 96, 1-7.	0.9	1
2	Multipole polarizabilities and dipole oscillator strengths of H-atom in nonideal classical plasmas. European Physical Journal Plus, 2022, 137, 1.	1.2	16
3	He atom in a quantum dot: Structural, entanglement, and information-theoretical measures. Physical Review A, 2022, 105, .	1.0	4
4	Information theory and Wigner crystallization: A model perspective. International Journal of Quantum Chemistry, 2021, 121, e26549.	1.0	2
5	Ionization of many-electron atoms by the action of two plasma models. Physical Review E, 2021, 103, 043202.	0.8	10
6	Structural modifications of two-electron systems under isotropic harmonic confinement. European Physical Journal D, 2021, 75, 1.	0.6	2
7	Excited states of the Gaussian two-electron quantum dot. European Physical Journal D, 2021, 75, 1.	0.6	1
8	Critical screening in the one- and two-electron Yukawa atoms. Physical Review A, 2018, 97, .	1.0	37
9	Exact normalized eigenfunctions for general deformed Hulth�n potentials. Journal of Mathematical Physics, 2018, 59, 122103.	0.5	7
10	A new comparison theorem on Hellmann potential. Journal of Molecular Modeling, 2018, 24, 299.	0.8	1
11	Hund's rule in the $(1s^2s)1,3S$ states of the two-electron Debye atom. Physics of Plasmas, 2018, 25, .	0.7	11
12	Two particle system in spherically confined plasma environment. European Physical Journal D, 2017, 71, 1.	0.6	8
13	Quantum information entropies for the $s$ -state P�teller-type potential. Journal of Mathematical Chemistry, 2016, 54, 1810-1821.	0.7	16
14	Position and momentum information theoretic measures of the pseudoharmonic potential. International Journal of Quantum Chemistry, 2015, 115, 1543-1552.	1.0	51
15	Soft and hard confinement of a two-electron quantum system. European Physical Journal Plus, 2014, 129, 1.	1.2	5
16	Aneesur Rahman. Resonance, 2014, 19, 671-683.	0.2	0
17	Bound state solutions of the Deng-Fan molecular potential with the Pekeris-type approximation using the Nikiforov-Uvarov (N-U) method. Journal of Mathematical Chemistry, 2013, 51, 976-991.	0.7	52
18	Exact solutions of the Schr�dinger equation for the pseudoharmonic potential: an application to some diatomic molecules. Journal of Mathematical Chemistry, 2012, 50, 1039-1059.	0.7	69

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19	Scaling properties of net information measures for bound states of spherical model potentials confined with finite barrier #. <i>Journal of Chemical Sciences</i> , 2012, 124, 241-245.	0.7	7
20	Spectral characteristics for a spherically confined $\hat{a}^{\dagger} \langle i \rangle a \langle i \rangle / \langle i \rangle r \langle i \rangle + \langle i \rangle b r \langle i \rangle^2 \langle i \rangle$ potential. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2011, 44, 185307.	0.7	15
21	A generalized relative complexity measure. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2011, 2011, P09016.	0.9	22
22	Static and dynamic dipole polarizabilities and electron density at origin: Ground and excited states of hydrogen atom confined in multiwalled fullerenes. <i>International Journal of Quantum Chemistry</i> , 2011, 111, 4425-4432.	1.0	31
23	Discrete spectra for confined and unconfined $\hat{a}^{\dagger} \langle i \rangle a \langle i \rangle / \langle i \rangle r \langle i \rangle + \langle i \rangle b r \langle i \rangle^2 \langle i \rangle$ potentials in $\langle i \rangle d \langle i \rangle$ -dimensions. <i>Journal of Mathematical Physics</i> , 2011, 52, .	0.5	11
24	Phenomenological Description of a Three-Center Insertion Reaction: An Information-Theoretic Study. <i>Journal of Physical Chemistry A</i> , 2010, 114, 1906-1916.	1.1	17
25	Soft-core Coulomb potentials and Heun's differential equation. <i>Journal of Mathematical Physics</i> , 2010, 51, 022107.	0.5	22
26	Electron density and its derivatives at the nucleus for spherically confined hydrogen atom. <i>International Journal of Quantum Chemistry</i> , 2009, 109, 688-692.	1.0	8
27	Energies and wave functions for a soft-core Coulomb potential. <i>Physical Review A</i> , 2009, 80, .	1.0	27
28	Electrostatic interpretation of the force $\hat{a}^{\dagger} \hat{a}^{\dagger} V_{xc} / \hat{a}^{\dagger} r$ connected with the exchange-correlation potential: direct relation to single-particle kinetic energy density in Be-atom. <i>World Scientific Series in 20th Century Physics</i> , 2009, , 689-692.	0.0	0
29	Dynamic dipole polarizabilities of the ground and excited states of confined hydrogen atom computed by means of a mapped Fourier grid method. <i>International Journal of Quantum Chemistry</i> , 2008, 108, 351-361.	1.0	20
30	Simultaneous degeneracy of the confined 2D hydrogen atom energy levels. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2008, 41, 205002.	0.6	8
31	Eigenspectrum properties of the confined 3D harmonic oscillator. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2008, 41, 225002.	0.6	11
32	A study of the confined 2D isotropic harmonic oscillator in terms of the annihilation and creation operators and the infinitesimal operators of the SU(2) group. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 265203.	0.7	10
33	Confined hydrogen atom by the Lagrange-mesh method: Energies, mean radii, and dynamic polarizabilities. <i>Physical Review E</i> , 2008, 78, 026701.	0.8	46
34	Characteristic features of net information measures for constrained Coulomb potentials. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2007, 40, 2147-2162.	0.6	37
35	Fisher-Shannon analysis of ionization processes and isoelectronic series. <i>Physical Review A</i> , 2007, 76, .	1.0	77
36	Degeneracy of confined D-dimensional harmonic oscillator. <i>International Journal of Quantum Chemistry</i> , 2007, 107, 798-806.	1.0	42

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37	Net information measures for modified Yukawa and Hulth�n potentials. International Journal of Quantum Chemistry, 2007, 107, 1864-1874.	1.0	46
38	Information entropies for eigendensities of homogeneous potentials. Journal of Chemical Physics, 2006, 125, 074117.	1.2	53
39	DFT reactivity indices in confined many-electron atoms. Journal of Chemical Sciences, 2005, 117, 379-386.	0.7	43
40	First-order correlation-kinetic contribution to Kohn-Sham exchange charge density function in atoms, using quantal density functional theory approach. International Journal of Quantum Chemistry, 2005, 101, 231-238.	1.0	4
41	Force $\hat{\nabla} V_{xc}/\hat{a}$ , associated with the exchange-correlation potential $V_{xc}(r)$ in the neutral Ne atom. Journal of Physics B: Atomic, Molecular and Optical Physics, 2005, 38, 1705-1717.	0.6	3
42	Characteristic features of Shannon information entropy of confined atoms. Journal of Chemical Physics, 2005, 123, 074110.	1.2	153
43	Shell-confined hydrogen atom. Journal of Chemical Physics, 2005, 122, 194324.	1.2	44
44	Alkali atoms confined to a sphere and to a fullerene cage. Canadian Journal of Physics, 2005, 83, 919-928.	0.4	8
45	On the importance of the $\hat{\rho}$ -density per particle $\hat{\rho}$ -(shape function) in the density functional theory. Journal of Chemical Physics, 2004, 120, 9969-9973.	1.2	88
46	Obtaining Kohn-Sham potential without taking the functional derivative. Bulletin of Materials Science, 2003, 26, 69-74.	0.8	4
47	Nuclear cusp of the virial exchange energy density for spherical atoms. Journal of Chemical Physics, 2002, 117, 9107-9110.	1.2	1
48	Mean excitation energy, static polarizability, and hyperpolarizability of the spherically confined hydrogen atom. Journal of Chemical Physics, 2002, 116, 4054-4057.	1.2	69
49	Improved Becke88 and PW91 exchange potentials. Journal of Physics B: Atomic, Molecular and Optical Physics, 2002, 35, 4711-4718.	0.6	5
50	A correlation of exchange energy-exchange potential at the nucleus in atoms. Journal of Chemical Physics, 2002, 116, 9570-9573.	1.2	4
51	Applications of electrostatic interpretation of components of effective Kohn-Sham potential in atoms. Journal of Chemical Physics, 2002, 117, 4684-4693.	1.2	9
52	Modified Slater potential and its application to the ground-states and excited-states of atomic systems. International Journal of Quantum Chemistry, 2002, 90, 327-333.	1.0	7
53	Static dipole and quadrupole polarizability of confined hydrogen atom with $Z=N/3$ ( $N=1-5$ ). International Journal of Quantum Chemistry, 2002, 90, 491-496.	1.0	18
54	Ground- and excited-state cusp conditions for the electron density. Journal of Chemical Physics, 2001, 115, 6300-6308.	1.2	48

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55	Atomic shell structure in Hartree theory. <i>Journal of Chemical Physics</i> , 2001, 114, 8784-8788.	1.2	7
56	Higher-order cusp of the density in certain highly excited states of atoms and molecules. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2000, 33, 1745-1751.	0.6	41
57	The creative Kohn. <i>Resonance</i> , 1999, 4, 56-63.	0.2	0
58	Characteristic features of the electrostatic potential for negative atoms within the work formalism. <i>Journal of Chemical Physics</i> , 1996, 104, 1025-1027.	1.2	3
59	Average local electrostatic potential and the core-valency separation in atoms. <i>International Journal of Quantum Chemistry</i> , 1995, 56, 399-408.	1.0	16
60	A Combination of the Work Formalism for Exchange with an Optimized Correlation Energy Functional for Atoms. <i>Journal De Physique II</i> , 1995, 5, 1277-1287.	0.9	1
61	Shell boundaries in rare earth atoms and tripositive ions using average local electrostatic potential. <i>Journal of Chemical Physics</i> , 1994, 101, 7779-7781.	1.2	4
62	Radii of monovalent atomic ions. <i>Journal of Chemical Physics</i> , 1993, 99, 3149-3150.	1.2	8
63	Density-functional-theory calculations of static dipole polarizability of some ions of interest in Mössbauer spectroscopy. <i>Physical Review A</i> , 1992, 45, 2076-2078.	1.0	5
64	Static polarizabilities for the ne-isoelectronic series using Harbola-Sahni potential. <i>International Journal of Quantum Chemistry</i> , 1992, 44, 1041-1044.	1.0	7
65	Upper bound to approximate ionic radii of atomic negative ions in terms of $\alpha^2$ . <i>Journal of Chemical Physics</i> , 1991, 95, 1421-1421.	1.2	3
66	Approximate sizes of monoatomic negative ions with fractional nuclear charge using electrostatic potentials. <i>Theoretica Chimica Acta</i> , 1991, 79, 373-375.	0.9	0
67	Static multipole polarizabilities of $F^{2-}$ and $Cl^{3-}$ using the Harbola-Sahni potential. <i>Physical Review A</i> , 1991, 44, 756-757.	1.0	11
68	Isoelectronic changes in energy of quark atoms and molecules via the Levy equation. <i>Theoretica Chimica Acta</i> , 1990, 77, 57-60.	0.9	2
69	Quadrupole polarizabilities of $F^{2-}$ , $Cl^{3-}$ , and $Br^{3-}$ using $\hat{L}$ theory. <i>Physical Review A</i> , 1990, 42, 3115-3116.	1.0	1
70	Generalized $Z\alpha$ transition state calculations of isoelectronic change in energy of atoms. <i>Journal of Chemical Physics</i> , 1990, 92, 2113-2114.	1.2	1
71	$Z\alpha$ transition state calculations of energy changes and electrostatic potentials in isoelectronic atoms and molecules. <i>Journal of Chemical Physics</i> , 1989, 90, 4373-4378.	1.2	12
72	Approximate radii for singly negative ions of 3d, 4d, and 5d metal atoms. <i>Journal of Chemical Physics</i> , 1989, 91, 5123-5124.	1.2	33

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73	Density functional theory calculations of one electron Rydberg states in Li atom. <i>Theoretica Chimica Acta</i> , 1989, 76, 373-375.	0.9	12
74	Electronegativities and isoelectronic energy and electronegativity differences for monatomic systems with nonintegral nuclear charges: Local-spin-density-functional calculations. <i>Physical Review A</i> , 1989, 40, 2260-2264.	1.0	6
75	Characteristic features of the electrostatic potentials of singly negative monoatomic ions. <i>Journal of Chemical Physics</i> , 1989, 90, 4370-4372.	1.2	125
76	Quadrupole antishielding factors for $F^{a-}$ , $Cl^{a-}$ , and $Br^{a-}$ using $\hat{L}^2$ theory. <i>Physical Review A</i> , 1988, 38, 4330-4332.	1.0	2
77	Two-electron one-photon x-ray transition energy in the Kr isoelectronic series. <i>Physical Review A</i> , 1987, 36, 2971-2972.	1.0	2
78	Sternheimer Antishielding Functions $\tilde{A}^{\nu}(r)$ and $\hat{I}^{\nu}(r)$ for Rare Earth Atoms. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1986, 41, 37-46.	0.7	7
79	Approximate upper bounds to the momentum expectation value ratios $\langle p^2 \rangle / \langle p \rangle^2$ and $\langle p \rangle / \langle p^2 \rangle$ in atoms. <i>Theoretica Chimica Acta</i> , 1986, 70, 115-117.	0.9	0
80	A simple bound to average electronic density and energy for atoms within an isoelectronic series. <i>International Journal of Quantum Chemistry</i> , 1986, 29, 165-167.	1.0	5
81	Electric-field-gradient sternheimer function for closed shell ions. <i>Hyperfine Interactions</i> , 1986, 30, 253-264.	0.2	8
82	Empirical estimates of electrostatic potentials at the nuclei in molecules. <i>International Journal of Quantum Chemistry</i> , 1985, 27, 231-232.	1.0	2
83	Nuclear quadrupole Sternheimer shielding-antishielding function for $N^{3-}$ , $Cl$ - and $Cd^{2+}$ ions in crystals. <i>Journal of Physics C: Solid State Physics</i> , 1985, 18, 3153-3156.	1.5	2
84	Bounds to average radial electron density in atoms using generalized Hölder inequality. <i>Journal of Chemical Physics</i> , 1985, 83, 3709-3709.	1.2	7
85	3d contribution to Sternheimer antishielding in Sc-Ni. <i>Journal of Physics F: Metal Physics</i> , 1984, 14, 521-523.	1.6	0
86	Empirical static quadrupole polarizability for closed shell ions in solids. <i>Journal of Physics C: Solid State Physics</i> , 1984, 17, L227-L228.	1.5	2
87	Empirical static quadrupole polarizability for some closed shell free atoms and ions. <i>Journal of Chemical Physics</i> , 1984, 80, 584-585.	1.2	6
88	Approximate upper bounds to average radial electron density expectation value $\langle \rho(r) \rangle$ within an isoelectronic series of atoms. <i>Journal of Chemical Physics</i> , 1984, 81, 5213-5214.	1.2	6
89	A simple $V_{ne} \sim \langle \rho \rangle$ relationship for atomic isoelectronic series. <i>Journal of Chemical Physics</i> , 1984, 81, 2861-2861.	1.2	2
90	Semiempirical estimates of static multipole polarizabilities for free atoms. <i>International Journal of Quantum Chemistry</i> , 1984, 26, 1051-1052.	1.0	2

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91	Radial sternheimer shielding-antishielding for He, Ne, and Ar isoelectronic series. <i>Hyperfine Interactions</i> , 1983, 14, 243-247.	0.2	0
92	Lithiated ammonia, amide anions, and ammonium ions. An ab initio study of structures, bonding, and energetic relationships. <i>Inorganic Chemistry</i> , 1983, 22, 496-503.	1.9	60
93	Isoelectronic changes in the Hartree-Fock properties of atoms. <i>Journal of Chemical Physics</i> , 1983, 78, 4779-4780.	1.2	0
94	Sternheimer antishielding functions for 3d transition metal atoms. <i>Journal of Physics F: Metal Physics</i> , 1982, 12, L97-L99.	1.6	1
95	Radial Sternheimer shielding-antishielding for rare gas atoms. <i>Hyperfine Interactions</i> , 1982, 12, 113-118.	0.2	3
96	Slater transition state calculations of valence electron spin-orbit splitting in atoms. <i>Journal of Chemical Physics</i> , 1981, 75, 5971-5971.	1.2	2
97	Static dipole and quadrupole polarizabilities of alkaline earth atoms. <i>International Journal of Quantum Chemistry</i> , 1981, 19, 373-376.	1.0	14
98	Overlap sternheimer shielding-antishielding functions for halogen ions in ionic solids. <i>Hyperfine Interactions</i> , 1981, 9, 355-359.	0.2	3
99	Polarizabilities and Sternheimer antishielding factor for ferriclike ions. <i>Physical Review A</i> , 1981, 23, 1026-1029.	1.0	10
100	On the geometry of NaPO <sub>3</sub> . <i>Journal of Chemical Physics</i> , 1981, 75, 1043-1044.	1.2	9
101	On deviations in Ruedenberg energy formula for molecules. <i>Journal of Chemical Physics</i> , 1981, 74, 1500-1501.	1.2	1
102	Slater transition state calculations of electron affinity of heavy atoms. <i>Journal of Chemical Physics</i> , 1981, 75, 1037-1038.	1.2	21
103	The Spherical Crystal Potential and Physical Properties of Ions in Crystals. A HF Calculation for the 10, 18, and 36 Electron Closed Shell Ions of X-Ray Scattering Factors, Diamagnetic Susceptibilities, and Dipole Polarizabilities. <i>Zeitschrift Fur Elektrotechnik Und Elektrochemie</i> , 1980, 84, 1240-1251.	0.9	10
104	Isoelectronic changes in total Hartree-Fock energy of atoms. <i>Theoretica Chimica Acta</i> , 1980, 57, 179-180.	0.9	1
105	Approximate relationship for isoelectronic changes in atomic average electron density. <i>International Journal of Quantum Chemistry</i> , 1980, 17, 1241-1242.	1.0	4
106	Energy-eigenvalue sum relationship in molecules. <i>International Journal of Quantum Chemistry</i> , 1980, 18, 907-909.	1.0	3
107	Sternheimer quadrupole shielding-antishielding function for F-, Cl-, Br-and I-in ionic solids. <i>Journal of Physics C: Solid State Physics</i> , 1980, 13, L423-L426.	1.5	1
108	Dependence on distance of the Sternheimer shielding-antishielding factor for 3d elements. <i>Journal of Physics F: Metal Physics</i> , 1980, 10, L67-L70.	1.6	5

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109	Hartreeâ€“Fockâ€“Slater transition state calculations of KLL Auger energies in Na and Mg. Journal of Chemical Physics, 1980, 73, 4704-4705.	1.2	3
110	Effect of self-consistency and crystalline potential in the solid state on nuclear quadrupole Sternheimer antishielding factors in closed-shell ions. Physical Review B, 1980, 22, 4167-4179.	1.1	111
111	Quadrupole polarizability and shielding-antishielding factors for Ce <sup>3+</sup> in ionic solids. Physical Review B, 1980, 22, 5542-5543.	1.1	0
112	Quadrupole polarizabilities of Fe <sup>3+</sup> and Ru <sup>3+</sup> -like ions. Physical Review A, 1980, 21, 693-694.	1.0	2
113	Isoelectronic energy changes from energyâ€“density functionals. Journal of Chemical Physics, 1980, 73, 5403-5404.	1.2	2
114	Isoelectronic Changes in the Behaviour of Nonrelativistic Electron Density Near the Nucleus in Free Ions. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1979, 34, 525-526.	0.7	0
115	Isoelectronic Changes in the Core Radius of Fe <sup>3+</sup> and Ru <sup>3+</sup> Like Ions. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1979, 34, 1253-1254.	0.7	0
116	Variation of shellwise s electron density at the nucleus in ionic solids. Journal of Physics C: Solid State Physics, 1979, 12, L75-L77.	1.5	1
117	Effect of a crystalline spherical potential on the Fermi-contact term in Mn <sup>2+</sup> and Fe <sup>3+</sup> ions. Physical Review B, 1979, 20, 2901-2904.	1.1	0
118	An approximate density equation for isoelectronic changes in atoms. Journal of Chemical Physics, 1979, 70, 5334-5334.	1.2	6
119	Effect of ionic size on the Koopmans ionization potentials in positive ions. Journal of Chemical Physics, 1979, 71, 559-560.	1.2	4
120	Sternheimer valence shielding and antishielding factors for several 2p and 3p atoms and ions. Physical Review A, 1979, 20, 1323-1326.	1.0	4
121	Variation of core-electron contributions to MÃ¶ssbauer isomer shift with ionic size. Physical Review B, 1979, 19, 2447-2448.	1.1	1
122	Atomic quadrupole moments: np <sup>2</sup> (n+1)s excited-state configuration of N, P, As, and Sb. Physical Review A, 1979, 20, 2276-2277.	1.0	6
123	The isoelectronic energyâ€“density relationship in atoms: 2â€“36 electron series. Journal of Chemical Physics, 1979, 71, 3551-3551.	1.2	4
124	Virial scaling corrections to Koopmansâ€™ ionization potential in positive ions of He, Ne, and Ar series. Journal of Chemical Physics, 1979, 70, 2025-2026.	1.2	1
125	Sternheimer antishielding factors of F?, Cl?, Br? and I?. Theoretica Chimica Acta, 1979, 52, 181-187.	0.9	9
126	The total Hartreeâ€“Fock SCF energy in atoms and ions. Journal of Chemical Physics, 1979, 70, 586.	1.2	9



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127	Slater transition-state calculations of shake-up energies in Ne, Ar, and Kr. Journal of Chemical Physics, 1979, 71, 1035-1036.	1.2	9
128	Notizen: Orbital Binding Energies within the Statistical Exchange Approximation: Ne and Ar Isoelectronic Series. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1979, 34, 901-902.	0.7	2
129	Atomic quadrupole moments of Al and In. Physical Review A, 1978, 18, 1327-1328.	1.0	6
130	Sternheimer shielding factors for atomic quadrupole moments: $np(n+1)s$ configuration of C, Si, Ge, Sn, and Pb. Physical Review A, 1978, 18, 26-28.	1.0	4
131	Nuclear hexadecapole antishielding factors: Tripositive lanthanide and tetrapositive actinide ions. Physical Review A, 1978, 18, 2450-2452.	1.0	2
132	Sternheimer valence shielding and antishielding factors for some ions of interest in Mössbauer spectroscopy. Physical Review B, 1977, 16, 107-114.	1.1	12
133	Quadrupole antishielding factors and polarizabilities in ionic crystals. Physical Review B, 1977, 15, 95-102.	1.1	35
134	Sternheimer antishielding factors for core electrons in metals: Comparison with free-ion results. Physical Review A, 1977, 16, 1786-1788.	1.0	9
135	Quadrupole antishielding factors for actinide ions. Physical Review A, 1976, 14, 880-881.	1.0	4
136	Quadrupole antishielding factors for some $3d^5, 4d^5$ , and $5d^5$ ions. Physical Review A, 1976, 14, 539-542.	1.0	13
137	Nuclear hexadecapole antishielding factors. Physical Review A, 1975, 11, 1162-1167.	1.0	8