

Electron affinities of alkaline-earth atoms by means of different density functionals

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Various correlation energy density functionals have been used to evaluate the electron affinities of the alkaline-earth atoms. A related approach based on polarization potentials was also tested. The results give evidence for the existence of stable negative ions of the atoms Ca, Sr, and Ba. The various density functionals perform relatively well yielding qualitatively correct predictions. © 1989 The American Physical Society.