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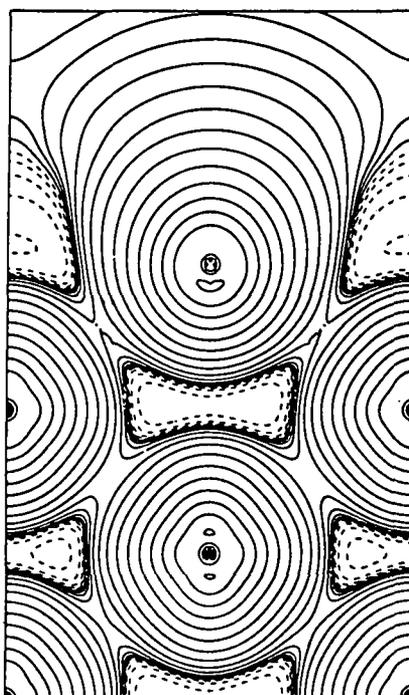
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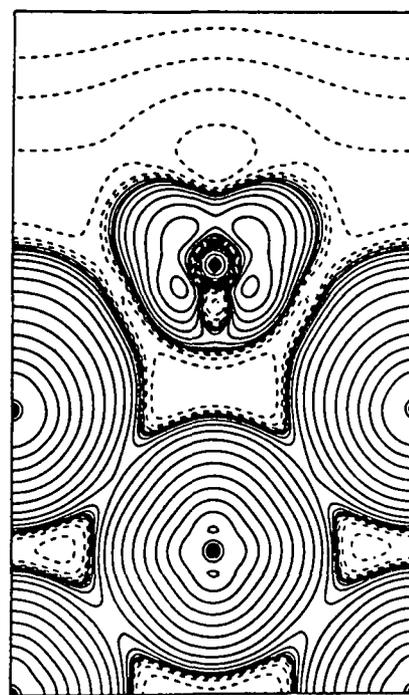
Editor's Choice

Figures appearing in the "EDITOR'S CHOICE" are those arising from materials research which strike the editor's fancy as being aesthetically appealing and eye-catching. No further criteria are applied and none should be assumed. When taken out of context, such figures often evoke images beyond and unrelated to the original meaning. Submissions of candidate figures are welcome and should include a complete source citation, a photocopy of the report in which it appears (or will appear), and a reproduction-quality original drawing or photograph of the figure in question.

Fe(001)



Ag/Fe(001)



Those of us with vivid imaginations or who are closet entomologists see the insect-like apparition. Of course the rest of us see contour plots of the positive (solid lines) and negative (dashed lines) spin density at the (001) surface of iron with (right) and without (left) a substituted silver atom replacing a top-layer iron atom. Using the full-potential linearized-augmented-plane-wave method, authors S. Ohnishi, M. Weinert, and A.J. Freeman (*Phys. Rev. B* **30** [1984] p. 36) show that the presence of the silver causes the spin density in the vacuum to switch from positive to negative. EDITOR'S CHOICE readers can find additional details in an article by the same authors plus C.L. Fu in *Hyperfine Interactions* **33** (1987) p. 53. The plane of atoms represented above is a (110) plane which is perpendicular to the (001) surface thus including the body-centered iron atom and giving the negative-spin-density-filled interstices their bow-tie shape.