

Cover Picture

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The cover picture shows a remarkable Pd₁₄₅ nanocluster, whose metal-core geometry was unambiguously characterized from complete analyses of crystallographic X-ray data. This unprecedented close-packed multishell carbonyl metal cluster was isolated from the reduction of a monomeric square-planar palladium precursor [Pd(PEt₃)₂Cl₂]. The structure is made up of three distinct shells, the outermost of which possesses 60 equivalent vertices along with 12 pentagonal, 20 equilateral triangular, and 30 square faces; this semiregular (Archimedean) polyhedron, named rhombicosidodecahedron (with Schläfli symbol 3.4.5.4), is a hitherto crystallographically unknown stereoisomer of the universally familiar C₆₀ buckyball, an icosahedrally truncated semiregular polyhedron of I_h symmetry with 60 equivalent vertices and 12 pentagonal and 20 hexagonal faces. More about this fascinating nanocluster can be found in the communication by L. Dahl et al. on p. 4121 ff

