

The shielding cone in spherical aromatic structures: Insights from models for spherical $2(N + 1)^2$ aromatic fullerenes

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A direct correlation between η - and spherical aromaticity of the aromatic structures was established by showing that they shared a characteristic shielding cone, resulting from a specific orientation of the applied field. Herein, we revealed the presence of a related long-range shielding cone in spherical aromatic species that was demonstrated through C₂₀, C₃₂, C₅₀, and C₆₀ Hirsch aromatic fullerenes. It was found that while for planar aromatics, the cone is reserved only for a perpendicularly applied field, for spherical aromatic compounds, the three-dimensional cage allows the formation of a shielding cone according to the given orientation of the external field. © 2017 the Owner Societies.