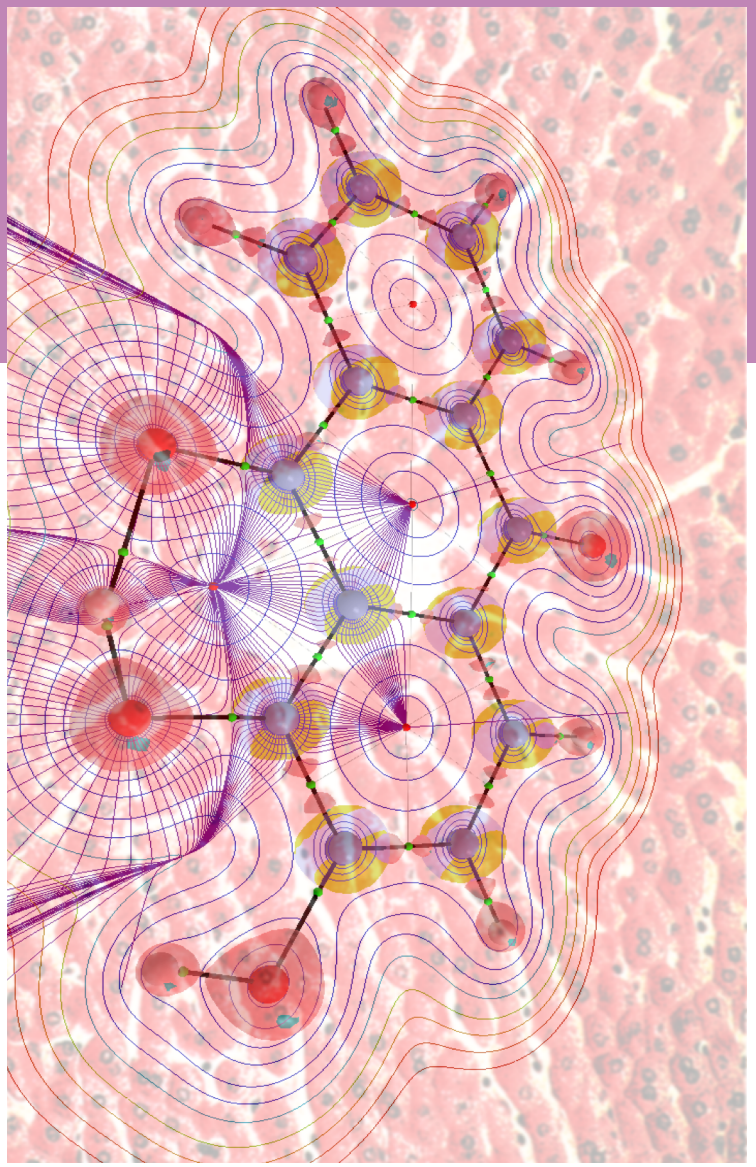
Cut It, Pinch It, Twist It:
A Theoretical look at Alizarin



Alizarin lake pigment

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A young Theoretical and Computational Chemist (born 1982) with a PhD in Sustainable Chemistry granted by the University of Porto and the Nova University of Lisbon, and pre-doctoral experience in tutoring, Food Chemistry, Organic Synthesis, and Environmental Chemistry. During his graduate research, he approached the limitations of the first study of Jacobsen catalyst using a combination of Density Functional Theory (DFT), Bader's Quantum Theory of Atoms In Molecules (QTAIM) and Multivariate Analysis techniques. Current research interests include the refinement of Gillespie's VSEPR-derived model for the inner Valence Shell of transition metal atoms; the development of novel theoretical approaches to graphene-derived materials, vibrational analysis and the QTAIM description of inter-molecular interactions. Recently, he devoted his efforts to the time evolution of the topology of the electron density, trying to shed new lights on the vibrational spectra of historical pigments.