

Concepts of Quantum Geometry from the Topological Origins of QTAIM

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The promising early beginnings of the theoretical development of the Poincaré-Hopf relation, abandoned in the early 1980s, have inspired the recent creation of quantum topology phase-diagrams to predict new isomer topologies. Alternative uses of the Poincaré-Hopf and Euler-Poincaré relations, e.g. for molecular recognition and phase transitions in solids respectively, are discussed. The author adds their perspective [1] and demonstrates that within the quantum topology framework, new theory can be created to link with traditional chemical ideas.

[1] S. Jenkins, Quantum topology phase diagrams for molecules, clusters, and solids. *Int. J. Quantum Chem.*, (Perspective Article) **113**: 1603–1608, (2013), [doi: 10.1002/qua.24398](https://doi.org/10.1002/qua.24398)

