**Next Generation QTAIM: Beyond Energetic and Scalar Measures**

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Next Generation Quantum Theory of Atoms in Molecules (NG-QTAIM)
is currently the only vector-based quantum chemical theory as all other
quantum chemical theories are scalar-based. NG-QTAIM can, for instance,
be used to distinguish enantiomers, isotopomers undergoing normal modes
of vibration, predict ring-opening reaction products, ground and excited
states at a conical intersection and predict reaction pathways of
permutation-inversion isomers and ultra-fast phenomena. As a
consequence, NG-QTAIM can uniquely be used to investigate iso-energetic
phenomena where the reliance on differences in geometric measures is
removed.