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Vector correlations in photodissociation dynamics

To obtain a complete understanding of molecular photodissociation, determination of both scalar and vector quantities are necessary. In particular, the vector properties, such as velocity and angular momentum of photofragments, and their correlations can provide the direct information about motions of either the electrons or the nuclei during the dissociation.

This tutorial seminar will provide an overview about the investigation of the vector correlations, particularly based on the recent works of Alexander and Rakitzis about photodissociation of diatomic and polyatomic molecules [1-4]. In their works, the vector correlations in the molecular frame can be measured and parameterized by using their newly developed formalisms [5-7], which can provide a clear physical significance to each molecular frame polarization parameter.

Reference:

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