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Author	Niklas Johansson	
Title (English)	A generalised topological test for intersections of molecular potential energy surfaces	
Title (Swedish)		
Abstract	<p>In this thesis a topological test for intersections between electronic potential energy surfaces constructed by Longuet-Higgins [<i>Proc. R. Soc. Lond. A</i>, 344:147-156, 1975] is generalised. The generalisation is accomplished by considering the space of complete adiabatic electronic bases as a topological space. Loops in the nuclear configuration space that map to non-trivial loops in the space of bases are shown to encircle an electronic degeneracy. It is further proved that it is not possible to make the generalised test more sensitive without using additional information. Examples from Jahn-Teller theory are presented to illustrate the test.</p>	
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