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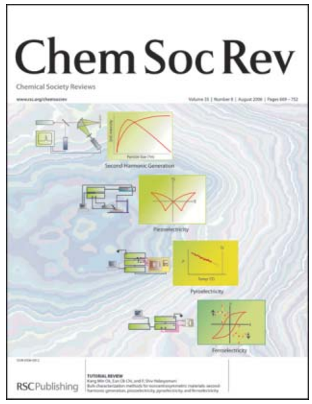
Cover

See Barry K. Carpenter, page 736.
Thermal generation of electronic excited states is easily recognised when the products are luminescent, as is the case for the two molecules shown on the left. The phenomenon can still occur, but is much harder to detect when no light is emitted, as is apparently the case for the two molecules on the right. What the luminescent and nonluminescent reactions have in common is a crossing of potential energy surfaces during the thermal reaction. Image reproduced by permission of Barry K. Carpenter, *Chem. Soc. Rev.*, 2006, **35**, 736.



Inside cover

See Kang Min Ok, Eun Ok Chi, and P. Shiv Halasyamani, page 710.
Four 'acentric' properties, second-harmonic generation, piezoelectricity, pyroelectricity, and ferroelectricity, are described. A brief history of each phenomenon is given, along with data interpretation. Image reproduced by permission of Kang Min Ok, Eun Ok Chi, and P. Shiv Halasyamani, *Chem. Soc. Rev.*, 2006, **35**, 710.

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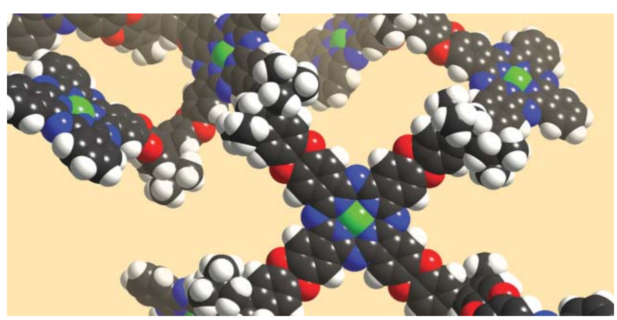

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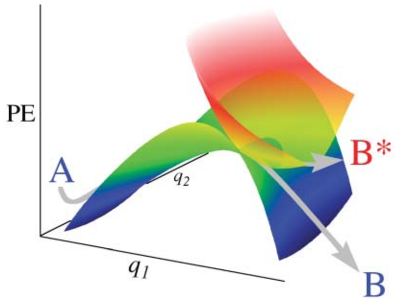

Electronically nonadiabatic thermal reactions of organic molecules

Barry K. Carpenter*

The thermal generation of luminescent electronic excited states is easy to detect. However, the thermal generation of non-luminescent excited states may be more common, especially for reactive intermediates.

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Electronic supplementary information (ESI) is available *via* the online article (see http://www.rsc.org/esi for general information about ESI).

