

Theoretical study on photoisomerization

Toshimasa Ishida

Fukui Institute for Fundamental Chemistry, Kyoto University, Japan

ishida@fukui.kyoto-u.ac.jp

Photoisomerization play an important role in photochromism, functions in life etc.

We present the theoretical study on

- (1) The isomerization of cyclohexadiene (CHD) to hexatriene
- (2) Isomerization of Schiff base retinal

(1) Photo-induced reversible ring-opening/closure of photochromic molecules such as diarylethenes and fulgides are applicable to molecular switches and memories. Isomerization between CH₂=CH-CH=CH-CH=CH₂ and CH₂=CH-CH=CH-CH=CH₂ is reversible.