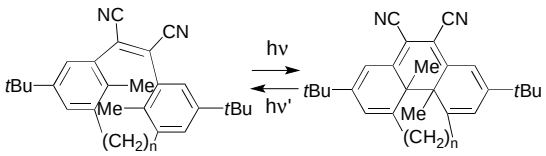
IRG PHENICS
ON-GOING COLLABORATION

Title of the collaboration:	Bridged Photochromic Diarylethenes Investigated by Ultrafast Absorption Spectroscopy

COUNTRY A:	Japan	COUNTRY B:	France
Name of group/Institution:	Saga University	Name of group/Institution:	Université des Sciences et Technologies de Lille
Name:	Michinori Takeshita	Name:	Stéphane Aloïse
Other participants:		Other participants:	Guy Buntinx
Role in the collaboration:	synthesis	Role in the collaboration:	spectroscopic study
Name of group/Institution:		Name of group/Institution:	Université Paris 7 - Paris Diderot
Name:		Name:	Aurélie Perrier
Other participants:		Other participants:	
Role in the collaboration:		Role in the collaboration:	calculation

Background, objectives, results:	Figure:
Photochromic cyclophan-1-enes are a sort of bridged diarylethene but the spectroscopic study has not yet been examined. We have been studying on the novel photochromic properties of the cyclophan-1-enes. For example, we found that a [2.2]metacyclophan-1-ene takes place wavelength dependent photochromic reaction and at certain wavelength, the quantum yield for photocyclization reaction was 1.0. This is the record for the highest quantum yield in the solution and owing to the cyclophan-1-ene structure.	

Common publications:	Bridged Photochromic Diarylethenes Investigated by Ultrafast Absorption Spectroscopy: Evidence for Two Distinct Photocyclization Pathways, S. Aloïse, M. Sliwa, Z. Pawlowska, J. Dubois, O. Poizat, G. Buntinx, A. Perrier, F. Maurel, S. Yamaguchi, M. Takeshita, *J. Am. Chem. Soc.* **2010**, *132*, 7379.