

IRG PHENICS ON-GOING COLLABORATION

Title of the collaboration: Photochromic nanoparticles: fabrication and optical property

COUNTRY A:	JP	COUNTRY B:	FR
Name of group/Institution:	Ehime University	Name of group/Institution:	ENS Cachan
Name:	T. Asahi	Name:	K. Nakatani
Other participants:		Other participants:	R. Métivier, A. Spangenberg
Role in the collaboration:	Spectroscopy	Role in the collaboration:	Fabrication
Name of group/Institution:		Name of group/Institution:	Université Paris-Sud
Name:		Name:	P. Yu
Other participants:		Other participants:	A. Léaustic
Role in the collaboration:		Role in the collaboration:	Synthesis

Background, objectives, results:	Figure:
<p>As a novel photofunctional material, nanocolloids of photochromic molecules are fabricated by Laser ablation (top down method) in water. Dual wavelength ablation, by taking advantage of photochromic properties, succeeded into fabrication of 100-nm sized nanoparticles of diarylethene. Photochromic property difference (nanoparticles vs. bulk vs solution) was investigated. Finally, single nanoparticle photo-switching was demonstrated by scattering spectroscopy under dark field microscopy.</p>	

Common publications, communications, bilateral funding, invitation funding, co-tutoring of students, ...:	<ul style="list-style-type: none"> ▪ Adv Mater., 21(3), 309-313 (2009) ▪ JSPS-EGIDE Sakura Program (2006-2007) ▪ JSPS Summer Program (A. Spangenberg, 2007)
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