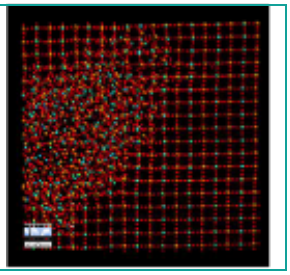
M2 – SMNO-nanomat – NOCNAM

Title:	NOn-Crystalline solids and NAnoMineralogy (NOCNAM)	
	Apogée code: MU5PYM13 **Number of credits:** 6 **Teaching hours:** 36h courses, 14h tutorial or project	

Lecturers:	Etienne BALAN (coordinator) IMPMC – 23-24 – 427 etienne.balan@sorbonne-universite.fr	Guillaume MORIN IMPMC – 23-24 – 503	Thierry AZAIS LCMCP - 44-54 - 404
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Objective	- Investigate the specificities of aperiodic or short-range ordered materials in terms of formation mechanisms, synthesis processes and structure-properties relations - Introduce to the diversity of application fields (industry, cultural heritage, biomineralogy, environment)
Content	• Structural properties of glasses and nano-materials • Investigation tools: diffraction-based methods, solid-state nuclear magnetic resonance, dynamical and vibrational properties • Diversity of glasses and amorphous materials, formation mechanisms and synthesis processes, phase transformations • Application fields: biomineralogy, environment & nanomineralogy, industrial and nuclear glasses • Industrial speaker (Saint-Gobain Recherche) to introduce current application topics
Prerequisites	- Physics and Chemistry of solids (CMP1, CMC) - Materials Investigation Methods (MIM)
Examination	- Bibliographic report and oral examination - Standard examination