CENTRE OF EXCELLENCE OF MULTIFUNCTIONAL ARCHITECTURED MATERIALS
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CEMAM
Laboratoire d'excellence

The Center of Excellence of Multifunctional Architectured Materials has established a collaborative multidisciplinarity approach to issues of technological importance at the forefront of materials research. The overarching goal, common to the 130 permanent researchers of our 6 Interdisciplinarity Research Programs (IRPs), is to produce the design principles of multi functionality by associating multimaterials and architecture with the aim to provide new advanced materials in terms of eco-efficiency.

During the first four years, CEMAM has developed its capacity to act with first successful results:

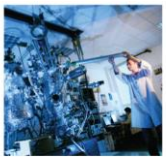
Firstly, we did the majority of our investments to maintain our shared facilities but also to provide world-leading equipments in elaboration (EBM additive manufacturing) and characterization (Electron Microscopy and X-ray Tomography) using a cost-sharing policy with our partner labs for a total amount of 3 M€.

Secondly, to promote collaborations with industry, we have developed a strategy based on the "1+1" rule (one CEMAM grant coupled with an industrial grant) for most of the **12 PhD** grants financed by IRPs in direct research support to **60 CEMAM members.**

We have used the same rule to develop international collaborations like with NTU in Singapore with **3 co-supervised theses**. We have also created **innovative master projects** that allow engineering students of PHELMA to be trained in a mode that is critically important to meet the complex, fast-moving challenges of high-tech SMEs.

To foster scientific dissemination, the labex has supported **5 workshops**, **an international summer school** focused on "Architectured Materials" and **a website** (www.cemam.fr) has been created. Our members are publishing high impact journal articles and getting cited at a pace that continues to accelerate.

Yves BRECHET has given a series of lectures at the College de France, covering topics of CEMAM. In 2017, we will see the groundbreaking of our **new eco-design center of architectured materials** (ECOMARCH) awarded in the CPER.




Combining long term competence with short notice reactivity