EMMI

European
Multifunctional
Materials Institute

- Electronics ceramics & Hybrids
- Polymers
- Sensors and actuators
- Photovoltaics
- Photoactive materials
- Photocatalysis
- Coatings
- Heterogeneous catalysis
- Solid state ionics
- Metamaterials
- Biomaterials
- Composites

www.emmi-materials.eu

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What is EMMI?

EMMI aims to promote Research and Higher Education in the field of Multifunctional Materials, in particular Hybrid and Ceramic Materials. EMMI specifically supports international collaborative projects and exchange of information, data and know-how.

EMMI was created in the framework of the European Network of Excellence FAME.

The key objectives of EMMI are to:

- Serve as a **European platform** for its members to **create and conduct projects** in the field of multifunctional materials science.
- Define a **legal framework for joint research projects** and **intellectual property** rights.
- Provide an infrastructure for **information exchange**, including internal and external communication tools, **databases** and organisation of conferences, **schools** and **meetings**.
- Develop long-term **collaboration with industry** partners, by offering an "adherent member" status, and providing the **services** mentioned above and others.

Fields of Research

Offering a complete chain for materials development, including materials design and modelling, synthesis and characterisation, EMMI's research topics include:

- Electronics ceramics & hybrids
- Photoactive materials
- Sensors and actuators
- Polymers
- Coatings
- Solid state ionics
- Biomaterials
- Composites
- Heterogeneous catalysis
- Photocatalysis
- Photovoltaics
- Metamaterials

Projects and Activities

Current examples (see website for full list)

European Masters Degree Course

- Course in advanced multifunctional materials
- 2-years studies in 2 or 3 different countries
- Supported by ERASMUS MUNDUS

www.fame-master.com

MaCoMuFi

- EU-financed FP6 STREP 2006-9
- Developing new **multiferroic** materials (films) with strong magnetoelectric coupling
- Application in spintronics and RF electronics
- 9 academic labs, 5 industry partners

www.macomufi.eu

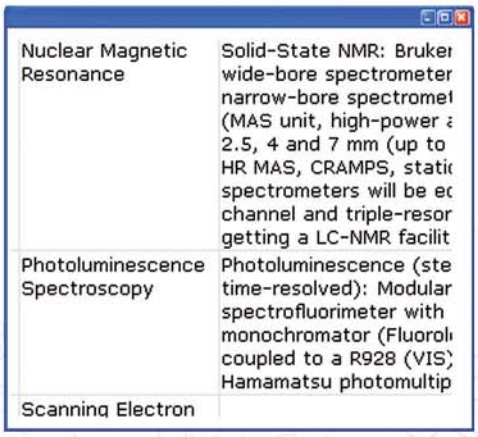
Nanostructured organotin-based hybrid thin films for gas sensing and optics

- PhD project 2007-9
- Financed by French Government
- Co-tutored by Uni Bordeaux and TU Darmstadt

(this is only one example for our international PhD projects)

EMMI Databases

online for registered users



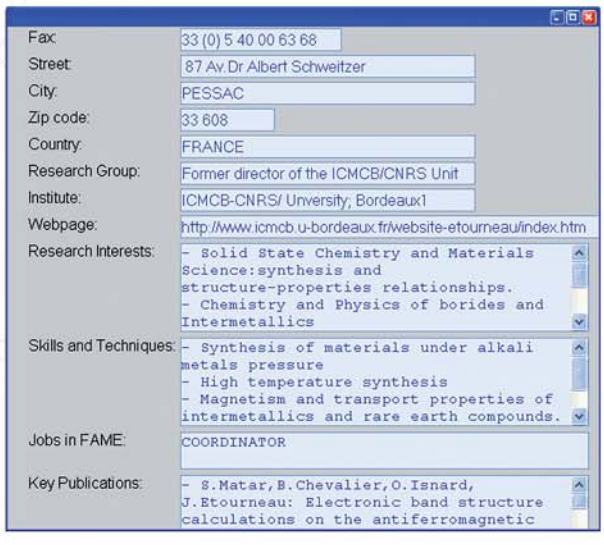
Nuclear Magnetic Resonance	Solid-State NMR: Bruker wide-bore spectrometer narrow-bore spectromet (MAS unit, high-power a 2.5, 4 and 7 mm (up to HR MAS, CRAMPS, static spectrometers will be ec channel and triple-resor getting a LC-NMR facilit
Photoluminescence Spectroscopy	Photoluminescence (ste time-resolved): Modular spectrofluorimeter with monochromator (Fluorol coupled to a R928 (VIS) Hamamatsu photomultip
Scanning Electron	

Research Equipment database:

Specialised, often unique research equipment, software and know-how; 140 instruments and 10 simulation software packages at EMMI labs.

People and Skills database:

Over 200 materials researchers with contact data, research interests, specialised skills, key publications.



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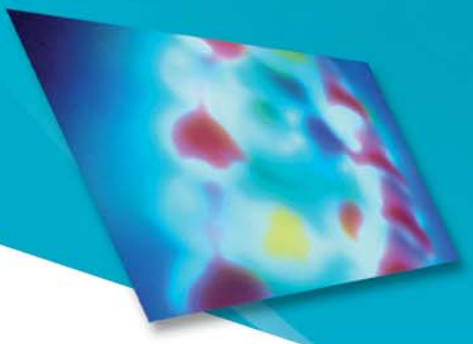
City:	PESSAC
Zip code:	33 608
Country:	FRANCE
Research Group:	Former director of the ICMCB/CNRS Unit
Institute:	ICMCB-CNRS/ University; Bordeaux1
Webpage:	http://www.icmcb.u-bordeaux.fr/website-etourneau/index.htm
Research Interests:	- Solid State Chemistry and Materials Science:synthesis and structure-properties relationships. - Chemistry and Physics of borides and Intermetallics
Skills and Techniques:	- Synthesis of materials under alkali metals pressure - High temperature synthesis - Magnetism and transport properties of intermetallics and rare earth compounds.
Jobs in FAME:	COORDINATOR
Key Publications:	- S.Matar, B.Chevalier, O.Isnard, J.Etourneau: Electronic band structure calculations on the antiferromagnetic

Membership

EMMI's full members are non-profit research organisations, but for commercial enterprises an adherent member status is available.

The services and benefits for members include:

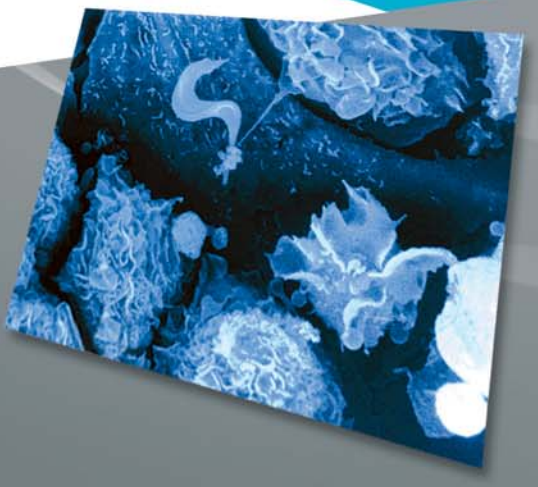
- Participation in cutting-edge research **projects** with European top laboratories in materials research.
- Access to **databases** for research personnel and equipment.
- Invitation to **training** workshops and schools.
- **Recruitment** opportunities through contact to **students** from our European **Masters Course**, PhD graduates and post-docs.
- Strategic **reports** and white papers under preferential conditions.



Current List of Full Members (a detailed list of laboratories involved can be found at our website)

- Université Bordeaux 1
- INP Grenoble
- Université Liege
- Université Catholique Louvain
- Technische Universität Darmstadt
- Fraunhofer Gesellschaft (ISC Würzburg)
- University Liverpool
- University of Sheffield
- University St Andrews
- University Aveiro
- Universitat Complutense Madrid
- Hebrew University Jerusalem

EMMI has also signed Cooperation Agreements with the CNRS (France), the CSIC (Spain) and Augsburg University (Germany).



Contact and Further Information

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