



## Thematic Network Polar Electroceramics POLECER G5RT-CT-2001-05024



## COORDINATOR

- Wanda Wolny, Ferroperm Piezoceramics A/S, Denmark

## PARTICIPANTS

- Ferroperm Piezoceramics A/S, Denmark
- Institut "Jozef Stefan", Slovenia
- Ecole Polytechnique de Lausanne - Laboratoire de Céramique, Switzerland
- Thales Research and Technologies, France
- Cranfield University - SIMS, United Kingdom
- Forschungszentrum Jülich - IFF, Germany
- Centro Ricerche Fiat SCpA, Italy
- Universitat Politècnica de Catalunya, Spain
- University of Latvia - ISSP, Latvia
- Fraunhofer-Gesellschaft zur Förderung der Angewandten Forschung e.V., IKTS, Germany
- Brüel & Kjær Sound & Vibration Measurement A/S, Denmark
- Groupement d'Interet Public "Ultrasons", France
- Vysoke Ucení Technické v Brně, Czech Republic
- Université de Limoges, SPCTS, France
- Kaunas University of Technology, Latvia
- National University of Ireland, Ireland
- National Physical Laboratory, United Kingdom
- University of Oslo - Dept. of Chemistry, Norway
- R&D National Institute for Materials Physics, Romania
- SINTEF - Materials Technology, Norway
- Consiglio Nazionale delle Ricerche - MASPEC, Italy
- University of Uppsala - Dept. of Materials Science, Sweden
- CSIC - Instituto de Ciencia de Materiales de Madrid, Spain
- Morgan Matroc Ltd., United Kingdom
- Simrad A/S, Norway
- Insavalor S.A., France
- Swedish Ceramic Institute, Sweden
- University of Oulu, Finland
- INAEL-IKVaristores S.A., Spain
- University of Birmingham, United Kingdom
- Technical University of Gdansk, Poland
- Universität Karlsruhe (Technische Hochschule), Germany
- PI Ceramic GmbH, Germany
- Institute of Physics - Academy of Sciences of the Czech Republic, Czech Republic
- Consiglio Nazionale delle Ricerche - IRTEC, Italy
- University of Leeds, United Kingdom
- Research Institute for Electrical Engineering, Romania
- Rheinisch-Westfälische Technische Hochschule Aachen, Germany
- Cedrat Recherche S.A., France
- Institute for Non-Ferrous and Rare Metals, Romania
- Tel Aviv University, Faculty of Engineering-Physical Electronics, Israel
- Institute of Fundamental Technological Research, Polish Academy of Sciences, Poland
- Universidade de Aveiro, Portugal
- Morgan Electro Ceramics, Holland
- Consejo Superior de Investigaciones Científicas, Spain
- Technical University of Liberec, Czech Republic
- Institute of Electron Technology, Poland
- ARC Seibersdorf GmbH, Austria
- Institute of Physical Chemistry, Romanian Academy, Romania
- Institute of Molecular Physics, Polish Academy of Sciences, Poland
- North Carolina State University, USA
- Materials Technology Centre TU/e TNO, Holland
- Microscale Sensors, University of Paisley, United Kingdom
- Institute of Materials Research, Slovak Academy of Sciences, Slovakia
- Institut d'Électronique et de Microélectronique du Nord, ISEN, France
- Université de Valenciennes et du Hainaut-Cambrésis - MIMM, France
- Sociéte Imasonic, France
- Noliac A/S, Denmark
- 'Demokritos', National Center for Scientific Research, Institute of Materials Science, Greece
- Budapest University of Technology and Economics, Dept. of Electronics Technology, Hungary
- Queen's University, Belfast, Dept. of Condensed Matter Physics & Materials, United Kingdom
- Ecole Centrale Paris, Lab. Structures, Propriétés et Modelisation des Solides, France
- Vermon, France
- CNR Istituto di Acustica, Italy

## PROJECT DESCRIPTION

The aim of Thematic Network POLECER is to identify key areas for development within Polar Electroceramics, strategically important to European industry, coordinate R&D activities in this field, pursue efficient dissemination of their results to industrial users and support implementation of emerging technologies leading to new products. Our strategic goal is to bring Europe into the forefront of technological development and strengthen its competitiveness, both by means of innovative products and by setting and promoting environmental standards for industry.

The principle objective of the participation of the Institute of Electron Technology (IET) in POLECER network is development of thick films based on relaxor ferroelectrics, cooperation with other R&D centers and dissemination of research results.

## OUR ROLE IN THE PROJECT

Cooperation with other R&D centers and dissemination of research results concerning thick films based on relaxor ferroelectrics

## RESULTS

- Participation in annual meetings and conferences organised by POLECER - presentation of the poster "Thick film composition based on relaxor ferroelectrics" at the conference: Piezoelectric Materials for the End User, Interlaken, 2002, Switzerland
- Cooperation with:
  - ♦ Ecole Polytechnique de Lausanne - Laboratoire de Céramique, Switzerland - deposition, patterning and sintering treatment of PMN-PT green tape, screen printing of PMN-PT thick films on silicon and alumina substrates and firing in multizone furnace
  - ♦ Thales Research and Technologies, France - integration of oriented crystal into thick films
- Realisation of two research projects financed by State Committee for Scientific Research connected with relaxor ferroelectrics and dissemination of the results

Contact person: Dorota Szwagierczak  
phone: (4812) 656 31 44, ext. 279,  
zrszwagi@cyf-kr.edu.pl