



European Network of Materials Research Centres

NAME : VTT TECHNICAL RESEARCH CENTRE OF FINLAND

INSTITUTION : VTT TECHNICAL RESEARCH CENTRE OF FINLAND

COUNTRY : FINLAND

Profile :

VTT Technical Research Centre of Finland is an impartial multidisciplinary expert organisation. VTT's special strength is its ability to create new, globally competitive technologies and innovations by combining knowledge and expertise in different fields. With its know how, VTT produces research, development, testing and information services to public sector and companies as well as international organisations.

With its staff of 2750 VTT experts VTT provides high-end technology solutions and innovation services. From its wide knowledge base, VTT can combine different technologies, create new innovations and a substantial range of world class technologies and applied research services. Through its international scientific and technology network, VTT can produce information, upgrade technology knowledge, create business intelligence and value added to its stakeholders. VTT's technological focus areas are applied materials, bio and chemistry processes, energy, information and communication technologies, industrial systems management, microtechnologies and electronics, and technology in the community. VTT's turnover is 230 Million €.

Activities :

VTT acts as a research and development partner in applied materials research. Our operations cover diverse fields of industry and extend from raw materials to the research and development of end products and processed products. By means of our strong experimentally-oriented research and research equipment, we ensure that new materials are brought to application-specific use. We take environmental aspects into account, especially in industrial problem situations. The development of natural materials is an essential focus area. Our starting point is customer-oriented research.

Making current processes more efficient and improving product characteristics are research areas in which we improve the competitiveness of current production plants. We also offer expertise in developing new products, methods and processes and assessing and reducing their environmental impact. Our supply covers reports, experimental laboratory research and pilot-level tests as well as factory-level expertise.

VTT's strength is multi-disciplinary expertise. We utilise our expertise in various fields in the solutions built for customers. The greatest innovations are most often created on the basis of networked expertise.

In its research, VTT emphasises the functional characteristics of materials, sustainable use of natural resources, a clean environment and saving materials. We direct our research keeping in mind the needs of all industrial actors from raw material manufacturers to product manufacturers.

**Expertise on following materials :**

- Characterization and usability
- Metals and composites
- Plastic materials
- Natural materials
- Functional materials
- Coating materials
- Nanomaterials
- Composite materials

Actual research domains concerning materials technology / Competences :

- Development of advance materials
- Characterizing material properties, composition and micro structure
- Development of production methods
- Analysis of materials degradation under mechanical and environmental stress.
- Modeling materials and structures
- Modeling and simulating material processing

Available research infrastructure :

- Microscopy (TEM, SEM, optical, AFM)
- Spectroscopy: EDS, SIMS, FTIR, XRD, ellipsometry, ELPI
- Mechanical testing
- Mechanical testing in controlled environments simulating various process conditions
- Chemical analysis
- Thermal analysis (DEA, DSC, DTA, TGA)
- NDE
- Hot cell facility for radioactive material testing

Coordinate address : VTT Technical Research Centre of Finland

P.O. Box 1000, FI-02044 VTT
Tel. +358 20 722 111
Fax +358 20 722 7001

URL : www.vtt.fi

Contact persons :

Name :	Jari Koskinen	Anne-Christine Ritschkoff, PhD
Function :	Technology Manager Adv. Mat.	Chief Research Scientist, Co-ordination of Applied Materials Research
Tel. :	+358 50 5956677	Tel. +358 40 514 9893
Fax :	+358 20 722 7069	
e-mail :	jari.koskinen@vtt.fi	anne-christine.ritschkoff@vtt.fi