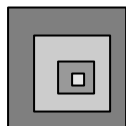


**UNIONE EUROPEA**  
**V PROGRAMMA QUADRO DI RICERCA E SVILUPPO TECNOLOGICO**  
**PROGETTI DI RICERCA IN COOPERAZIONE (CRAFT)**

**RICERCHE PARTNER**

Si riportano, di seguito, alcune ricerche di partner per progetti di ricerca comunitari in cooperazione (CRAFT), segnalati dall'APRE (Agenzia per la Promozione della Ricerca Europea).  
 Le imprese interessate, possono prendere contatto direttamente con l'APRE, ai recapiti indicati nei relativi progetti.



**APRE**

Agenzia per la  
 Promozione  
 della Ricerca  
 Europea

**RICERCHE PARTNER IN ENERGIA ED AMBIENTE**

per la scadenza CRAFT del 28 febbraio 2002 (ultima scadenza utile per i  
 progetti CRAFT nel V Programma Quadro).

**PARTNER SEARCH**  
**ENEUCR26**

TITLE OF THE PROJECT (+ ACRONYM)	<b>Recycled PVC roofing material</b>
INTENDED RESEARCH PROJECT	<input checked="" type="checkbox"/> <b>COOPERATIVE RESEARCH</b> <input type="checkbox"/> <b>RTD PROJECT</b> <input type="checkbox"/> <b>OTHER (specify):</b>
DEADLINE	February 2002
THEMATIC PROGRAMME (e.g. "Energy and Environment")	"Energy and Environment"
PROJECT DESCRIPTION Main objectives and results of research (10 lines)	<p>Single-layer materials for covering roofs constitute new development in the field. The bituminous or polimer-bituminous products available currently on the market have however several disadvantages: they are thick (4-5mm or more), hence heavy and not sufficiently elastic. This makes their transport, storage and laying on roofs difficult. High price is also a problem. The proposed project aims at elaborating an innovative technology of recycling plasticised PVC to produce single-layer decorative roof coverings of high quality which can be offered at competitive price. The production of these novel roof coverings will offer an optimum way to utilise plasticised PVC waste and hence to decrease burden on the environment.</p> <p>A special prototype technological line of the production capacity of 150 kg/h, composed of specifically designed machines, will be designed, built, tested and optimised. The key process of the technology involves cyclic rolling of the raw material mixture to produce the covering. The process parameters need to be optimised. A range of coverings differing in thickness, texture, colour performance tested. Special emphasis will be put on the compatibility of the products with the European standards and regulations. Further implementation potential e.g. to produce floor coverings will be recognised. r, surface finish will be produced and their quality, ease of application and practical.</p>

INNOVATIVE ASPECTS with respect to state of the art (5 lines)			
MAIN ADVANTAGES (5 lines)			
ORGANISATION TYPE (of proponent)	<input checked="" type="checkbox"/> SME <input type="checkbox"/> large company	<input type="checkbox"/> University <input type="checkbox"/> research centre	<input type="checkbox"/> consultancy <input type="checkbox"/> other
PARTNERSHIP: SMEs and RTD performers already involved	TRIU - PT KABEX - PL Interest from IL and PT University of Kraków (prof. Sikora) is founding father of the idea and interested to perform RTD		
PROFILE OF PARTNERS SOUGHT Type (e.g. "SMEs producing ..."), competence sought and intended role in the project (5 lines)			
Date of this search	8 october 2001		
For further information PLEASE CONTACT: <b>APRE – Agency for the Promotion of European Research</b> <b>Name of contact person: Ceccarelli@apre.it</b> <b>Tel. +39.06.5911817</b> <b>Fax. +39.06.5911908</b> <b>E-mail:</b>			

**PARTNER SEARCH  
ENEUCR27**

TITLE OF THE PROJECT (+ ACRONYM)	<b>Novel Absorbant for Heavy Oil Clean-Up</b>		
INTENDED RESEARCH PROJECT	<input checked="" type="checkbox"/> <b>COOPERATIVE RESEACH</b> <input type="checkbox"/> <b>RTD PROJECT</b> <input type="checkbox"/> <b>OTHER (specify):</b>		
DEADLINE	February 2002		
THEMATIC PROGRAMME (e.g. "Energy and Environment")	"Energy and Environment"		
PROJECT DESCRIPTION Main objectives and results of research (10 lines)	<p>Oil Spills at sea are notorious for their severe adverse impact on the environment. Tanker disasters - like the one in Brittany last year, and more recently near the Galapagos with its unique habitat - cause great concern all over the world and billions of dollars are spent to clean-up the spills as good as we can.</p> <p>Recently it was discovered that an existing natural material - with good availability against low costs - after a special treatment has the ability to absorb up to 20x its own volume of heavy oil, whilst it does not absorb water. The material can be adhered to other materials, e.g. a fish net, which serves as a vehicle to bring the absorbant to the oil. The net absorbs the oil and allows to collect the spills in a relatively easy, fast and controlled manner.</p> <p>Other applications could be developed as well, such as tank cleaning, harbour pollution clean-up and garage floor clean-up.</p>		
INNOVATIVE ASPECTS with respect to state of the art (5 lines)			
MAIN ADVANTAGES (5 lines)			
ORGANISATION TYPE (of proponent)	<input checked="" type="checkbox"/> SME <input type="checkbox"/> large company	<input type="checkbox"/> University <input type="checkbox"/> research centre	<input type="checkbox"/> consultancy <input type="checkbox"/> other
PARTNERSHIP: SMEs and RTD performers already involved	WNP Ltd (UK) WIPA - D A. Silva Matos - PT		
PROFILE OF PARTNERS SOUGHT Type (e.g. "SMEs producing ..."), competence sought and intended role in the project (5 lines)	NDA required		
Date of this search	8 october 2001		
For further information PLEASE CONTACT: <b>APRE – Agency for the Promotion of European Research</b> <b>Name of contact person: Ceccarelli@apre.it</b> <b>Tel. +39.06.5911817</b> <b>Fax. +39.06.5911908</b> <b>E-mail:</b>			

## PARTNER SEARCH ENEUCR28

TITLE OF THE PROJECT (+ ACRONYM)	PPT The pulse-plasma technology and equipment for formation of high-alloyed microcrystalline layers on working surfaces of tools and machine parts		
INTENDED RESEARCH PROJECT	<input checked="" type="checkbox"/> <b>COOPERATIVE RESEACH</b> <input type="checkbox"/> <b>RTD PROJECT</b> <input type="checkbox"/> <b>OTHER (specify):</b>		
DEADLINE	February 2002		
THEMATIC PROGRAMME (e.g. "Energy and Environment")	"Energy and Environment"		
PROJECT DESCRIPTION Main objectives and results of research (10 lines)	<p>The idea is a technology for treatment of the working surfaces of pieces with a high-energy flow of alloying elements and simultaneously with a flow of the electric current supplied to the piece. Short time of interaction of the flow of alloying elements and the piece surface prevents heating of the entire piece and activation of the alloying process by the electric current (hence, by the pulsed magnetic field) provide an abnormal mass transfer of elements into the piece. This allows formation of the microcrystalline state in the surface layer with a high content of alloying elements (30-50 %). The high energy density of the flow (up to 107 W/cm<sup>2</sup>) makes it possible to perform treatment in the air atmosphere without surface preparation.</p> <p>Production of high-alloyed microcrystalline layers on wearing surfaces of metal pieces leads to a considerable increase (3-10 times) in performance of the pieces. In addition, the offered technology makes it possible to manufacture pieces also from low alloys characterized by high strength and ductility. Along with an increased performance, this provides reduction in cost of the material used and costs of machining and heat treatment.</p> <p>The process machines and devices for introduction of alloying elements into the high-energy flow have been developed. The comprehensive investigations into the efficiency of modification of surfaces of pieces made from different alloys have been completed.</p> <p><u>Application area:</u> tools in which high hardness, heat resistance and anti-friction should combine with a high strength of the entire piece material. This is also important for machine parts manufactured from iron-, titanium-, aluminium- and copper-based alloys operating under intensive wear conditions.</p>		
INNOVATIVE ASPECTS with respect to state of the art (5 lines)			
MAIN ADVANTAGES (5 lines)			
ORGANISATION TYPE (of proponent)	<input checked="" type="checkbox"/> SME <input type="checkbox"/> large company	<input type="checkbox"/> University <input type="checkbox"/> research centre	<input type="checkbox"/> consultancy <input type="checkbox"/> other

PARTNERSHIP: SMEs and RTD performers already involved	Selmers – NL Yazda – PL
PROFILE OF PARTNERS SOUGHT Type (e.g. “SMEs producing ...”), competence sought and intended role in the project ( <i>5 lines</i> )	
Date of this search	8 october 2001
For further information PLEASE CONTACT: <b>APRE – Agency for the Promotion of European Research</b> <b>Name of contact person: Ceccarelli@apre.it</b> <b>Tel. +39.06.5911817</b> <b>Fax. +39.06.5911908</b> <b>E-mail:</b>	

**PARTNER SEARCH  
ENEUCR29**

TITLE OF THE PROJECT (+ ACRONYM)	AIRQUALITY Application of Fuzzy Control in Indoor Air Quality Management		
INTENDED RESEARCH PROJECT	<input checked="" type="checkbox"/> <b>COOPERATIVE RESEACH</b> <input type="checkbox"/> <b>RTD PROJECT</b> <input type="checkbox"/> <b>OTHER (specify):</b>		
DEADLINE	February 2002		
THEMATIC PROGRAMME (e.g. "Energy and Environment")	"Energy and Environment"		
PROJECT DESCRIPTION Main objectives and results of research (10 lines)	<p>Heating, ventilating and air conditioning (HVAC) control systems are used to maintain the desired climatic conditions in buildings. These control systems adapt heating, ventilating and cooling depending on the outdoor climatic conditions and the use of the building. Their performances have a key impact on three main areas: the indoor air quality, and therefore directly, on the health of building occupants, the energy consumption, and the impact on environment.</p> <p>This RTD project is aimed at the development of an intelligent management system monitoring and controlling the indoor air quality in large closed spaces (buildings). Therefore, a new type of air quality management system shall be developed, integrating a gas detector system, a ventilation system and an air treatment system. This system shall be controlled by an innovative fuzzy logic control system, allowing a cost-efficient method for the complex problems and their mutual interactions. Hereby, the focus will be on optimising the three performance parameters health of building occupants, energy consumption and impact on environment. An important part of this management system will be a revolutionary positive temperature coefficient (PTC) heater/sensor system, which controls the working gas/liquid homogeneity of HVAC-systems. With the purpose of developing economical units, according to the different characteristics of the indoor spaces and the risks associated, different types of gas sensors (e.g. chemical sensors and infrared sensors) will be explored. A prototype unit will be developed and tested</p>		
INNOVATIVE ASPECTS with respect to state of the art (5 lines)			
MAIN ADVANTAGES (5 lines)			
ORGANISATION TYPE (of proponent)	<input checked="" type="checkbox"/> SME <input type="checkbox"/> large company	<input type="checkbox"/> University <input type="checkbox"/> research centre	<input type="checkbox"/> consultancy <input type="checkbox"/> other
PARTNERSHIP: SMEs and RTD performers already involved			

<b>PROFILE OF PARTNERS SOUGHT</b> Type (e.g. "SMEs producing ..."), competence sought and intended role in the project <i>(5 lines)</i>	
Date of this search	8 october 2001
For further information PLEASE CONTACT: <b>APRE – Agency for the Promotion of European Research</b> <b>Name of contact person: Ceccarelli@apre.it</b> <b>Tel. +39.06.5911817</b> <b>Fax. +39.06.5911908</b> <b>E-mail:</b>	

**PARTNER SEARCH  
ENEUCR30**

TITLE OF THE PROJECT (+ ACRONYM)	MORES Remote Monitoring of Small-scale Renewable Energy Systems		
INTENDED RESEARCH PROJECT	<input checked="" type="checkbox"/> <b>COOPERATIVE RESEARCH</b> <input type="checkbox"/> <b>RTD PROJECT</b> <input type="checkbox"/> <b>OTHER (specify):</b>		
DEADLINE	February 2002		
THEMATIC PROGRAMME (e.g. "Energy and Environment")	"Energy and Environment"		
PROJECT DESCRIPTION Main objectives and results of research (10 lines)	<p>Other than high investment costs, one of the problems of Renewable Energy systems are perceived unreliable performance in the eyes of the general public.</p> <p>This project focuses on the development of a remote monitoring system, suitable for several small-scale Renewable Energy technologies (PV, Wind, Small Hydro Power). The challenging idea is to acquire measurement locally (by sensors) and to send the data over the Internet to Renewable Energy experts for analysis. The RTD work comprises the hardware infrastructure (notably sensor interfaces to microcontrollers and communication protocols) as well as software (database structure, servers for SQL® and Tarantella®).</p> <p>This set-up would be powerful to get real world test data for manufacturers, R&amp;D Centres, future investors and policy makers of Renewable Energy systems and components (like batteries, PV cells, wind turbines).</p>		
INNOVATIVE ASPECTS with respect to state of the art (5 lines)			
MAIN ADVANTAGES (5 lines)			
ORGANISATION TYPE (of proponent)	<input checked="" type="checkbox"/> SME <input type="checkbox"/> large company	<input type="checkbox"/> University <input type="checkbox"/> research centre	<input type="checkbox"/> consultancy <input type="checkbox"/> other
PARTNERSHIP: SMEs and RTD performers already involved			
PROFILE OF PARTNERS SOUGHT Type (e.g. "SMEs producing ..."), competence sought and intended role in the project (5 lines)			
Date of this search	8 october 2001		



For further information PLEASE CONTACT:

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**E-mail:**

**PARTNER SEARCH  
ENEUCR31**

<b>TITLE OF THE PROJECT</b> (+ ACRONYM)	<u>RECEPS Recycling of Expanded Polystyrene</u>		
<b>INTENDED RESEARCH PROJECT</b>	<input checked="" type="checkbox"/> <u>COOPERATIVE RESEACH</u> <input type="checkbox"/> <u>RTD PROJECT</u> <input type="checkbox"/> <u>OTHER (specify):</u>		
<b>DEADLINE</b>	<u>February 2002</u>		
<b>THEMATIC PROGRAMME</b> (e.g. "Energy and Environment")	<u>"Energy and Environment"</u>		
<b>PROJECT DESCRIPTION</b> Main objectives and results of research (10 lines)	<u>Expanded Polystyrene (EPS) consists of 98% air and 2% polystyrene. It is inert, clean, a good isolator and shock-absorber and of very low-weight, and for this reason EPS is frequently used as a packaging material and isolation material in constructions. Whilst EPS is very good recyclable, the economics are often unfavourable, because of the high transport costs of the EPS waste. With this problem in mind, Novatech - a small Dutch chemical engineering company - developed a chemical solution. The chemicals convert the EPS waste into a stable and safe paste which a density of 480 kg/m3. The paste can be easily further processed, either by converting it into a high-grade fuel or into PS again, recycling the souldion chemicals for re-use in the process. This system has been patented.</u> <u>As a next step this system needs to be further developed to industrial scale. Following is required:</u> <u>The collection system has to be developed, which is typically a mobile unit (built onto a van).</u> <u>A pilot cracking plant needs to be developed in order to break down the paste into PS and recycling chemicals.</u>		
<b>INNOVATIVE ASPECTS</b> with respect to state of the art (5 lines)			
<b>MAIN ADVANTAGES</b> (5 lines)			
<b>ORGANISATION TYPE</b> (of proponent)	<input checked="" type="checkbox"/> SME <input type="checkbox"/> large company	<input type="checkbox"/> University <input type="checkbox"/> research centre	<input type="checkbox"/> consultancy <input type="checkbox"/> other
<b>PARTNERSHIP:</b> SMEs and RTD performers already involved			

<b>PROFILE OF PARTNERS SOUGHT</b> Type (e.g. "SMEs producing ..."), competence sought and intended role in the project ( <i>5 lines</i> )	<u>Partners to be acquired:</u> <ul style="list-style-type: none"> <li>• Special-purpose vehicles manufacturer</li> <li>• EPS recycling operators</li> </ul> Recycling technology suppliers for EPS packaging waste streams
Date of this search	8 october 2001
For further information PLEASE CONTACT: <b>APRE – Agency for the Promotion of European Research</b> <b>Name of contact person: Ceccarelli@apre.it</b> <b>Tel. +39.06.5911817</b> <b>Fax. +39.06.5911908</b> <b>E-mail:</b>	

**PARTNER SEARCH  
ENEUCR32**

<u>TITLE OF THE PROJECT</u> (+ ACRONYM)	IBPV Innovative Battery for Photovoltaics Applications		
<u>INTENDED RESEARCH PROJECT</u>	<input checked="" type="checkbox"/> COOPERATIVE RESEACH <input type="checkbox"/> RTD PROJECT <input type="checkbox"/> OTHER (specify):		
<u>DEADLINE</u>	February 2002		
<u>THEMATIC PROGRAMME</u> (e.g. "Energy and Environment")	"Energy and Environment"		
<u>PROJECT DESCRIPTION</u> Main objectives and results of research (10 lines)	<p>English researchers recently discovered a method to make normal rubber electrically conductive on the molecule level. This is a true break-through and could imply a multi-billion dollars market.</p> <p>One of the applications of this intrinsically conductive rubber is a battery, as the material is also capable of storing electricity (!). Although there is an interesting effect, however, further research is necessary to optimise the material and develop and test applications, etc. A battery cell consists of a metal sheet and a conductive rubber sheet. Indeed, if successful, a simple battery will result, which is cheap and maintenance free. Moreover, this battery can be shaped almost freely: it might be suitable to integrate it with a PV panel (one of the issues to investigate).</p>		
<u>INNOVATIVE ASPECTS</u> with respect to state of the art (5 lines)			
<u>MAIN ADVANTAGES</u> (5 lines)			
<u>ORGANISATION TYPE</u> (of proponent)	<input checked="" type="checkbox"/> SME <input type="checkbox"/> large company	<input type="checkbox"/> University <input type="checkbox"/> research centre	<input type="checkbox"/> consultancy <input type="checkbox"/> other
<u>PARTNERSHIP:</u> SMEs and RTD performers already involved			
<u>PROFILE OF PARTNERS SOUGHT</u> Type (e.g. "SMEs producing ..."), competence sought and intended role in the project (5 lines)	<p>Partners to be found:</p> <p>Rubber (sheet) manufacturer - preferably PT / SME</p> <p>PV panels manufacturer (I don't know whether we could find an SME here - most are large companies)</p>		
<u>Date of this search</u>	8 october 2001		

For further information PLEASE CONTACT:

**APRE – Agency for the Promotion of European Research**

**Name of contact person: Ceccarelli@apre.it**

**Tel. +39.06.5911817**

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**E-mail:**

## GREUCR90-2 Partner search Form for a CRAFT project

Headline title for your entry:

Competitive fabrication route of industrial components made by aluminium matrix composites reinforced with intermetallic particles

Short description of proposal or expertise:

In the present project, new materials, Al alloy metal matrix composites reinforced with around 20% vol. of intermetallic particles, developed in a former project (BRPR-CT97-0547), will be processed by optimized techniques, suitable for mass production of components. A powder metallurgy technique that will be used is: production of Al alloys by gas atomisation, production of the intermetallics particles by the inexpensive, non-contaminant and low-energy consuming self-propagated high-temperature synthesis method (SHS); consolidation by sintering, extrusion or forging.

The overall objective is to be able to make lightweight prototypes for different industrial sectors (automotive, motorcycle, plastics processing machinery, valves/seals, hydraulic cylinders, microelectronic heat release materials, tyre studs, etc.) with: s

- High wear and friction resistance
- High thermal stability
- High fatigue and thermal fatigue properties
- High specific elastic modulus
- Minimum or no machining operations to be done
- High recyclability
- Reduced cost in comparison to available current materials

Please suggest keywords to describe the research area of your proposal.

Aluminium alloy	Intermetallic	Composite	Powder metallurgy	Extrusion	Injection
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Partners Expertise Sought

Partner skills and competencies needed:

SME active in: extrusion or injection or powder metallurgy or related subject.

Target Partner country:

Any except UK and Spain

Please provide a contact list of partners already acquired:

- 1) Activity: Forging of metal matrix composites. SME from UK.
- 2) Activity: Manufacturing of composites. SME from UK.
- 3) Activity: Machining of difficult materials. SME from Spain.
- 4) Activity: Transport industry. Czech Sponsor.
- 5) Activity: Research. Spanish organisation 1.
- 6) Activity: Research. Spanish organisation 2.
- 7) Activity: Research. Czech University.

**Please Contact Martina Desole APRE- [desole@apre.it](mailto:desole@apre.it)**