

**EREDI, Research and Development s.a.** is a small SME with experience in EU-funded R&D projects. For more information visit the site: [www.eredi.gr](http://www.eredi.gr). EREDI s.a. is professionally active in research and innovation, targeting the development of products for the market, using **fluidisation** as the basic technical solution. Actually, a pilot line of **biomass combustion** (sawdust or solid fuel of spent olives) of small scale (50KW<sub>th</sub>) was developed, producing hot air for energy production. This conversion configuration is accomplished using a **circulating fluidised bed** and especially related to the **energetic valorisation of biomass**. EREDI s.a. is interesting to participate in E.U. project, targeting the valorisation of biomass, using **fluidisation**, as the basic technical solution.

Also, EREDI s.a. is interesting to participate in a project, targeting to produce **Composite powder fabrication or multilayer nanocoatings, in fluidized bed reactors**. Inside this sector of project, EREDI s.a., expects to collaborate within the follows sectors:

- Design of a laboratory scale C.F.B/F.B reactor for coating deposition on bulk substrates and powders. Construct the reactor and develop the appropriate complementarities parts. Production of related experimental data. The design of the reactor will be based in to the theoretical thermodynamic studies for process optimization, fluidizing conditions temperature, precursors, etc, in order to obtain deposition of multilayer submicron coatings, of nitrides & borides, on both bulk substrates & powders.
- Design and fabrication of a prototype pilot unit of circulating or bubbling fluidized bed reactor for multilayer submicron coatings and composite powder fabrication. Production of related experimental data.

#### **Related EU- funded R&D projects by Dr Yannis FLITRIS, President of EREDI s.a..**

1. EEC-Project INDUSTRIAL AND MATERIALS TECHNOLOGIES (BRITE -EURAM II), COOPERATIVE RESEARCH: “Improved coatings on metals using fluidized bed thermochemical treatments”. CRAFT CR 1246-91 (1/8/1994. End 30/7/1997).
2. EEC-Project INDUSTRIAL AND MATERIALS TECHNOLOGIES (BRITE -EURAM II), COOPERATIVE RESEARCH: «Thermolytic recovery of Cu and Precious metals from electronic circuit boards and Cu «laminas» in a Fluidized bed reactor», CRAFT BES2-5477. (Contrat BRST-CT98-5390). Beginning 15/11/1998.

#### **Related publications by Dr Yannis FLITRIS, President of EREDI s.a.**

1. **FLITRIS Y.**  
FLAMANT G.  
HATZIKONSTANTINOY P.      “WALL-TO-FLUIDIZED BED RADIATIVE HEAT  
TRANSFER ANALYSIS USING THE  
PARTICLE MODEL”  
**Chemical Engineering Communication**  
1988, Vol. 72, pp. 187-199
  
2. FLAMANT G.  
GAUTHIER D.  
BOUDHARI C.  
**FLITRIS Y.**      “A 50 KW FLUIDIZED BED HIGH TEMPERATURE  
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**Computers & Chemical Engineering**  
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6. TSIPAS D.N.  
TRIANTAFYLIDIS G.K.  
KIPKEMOI J.  
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PROTECTION OF STEELS IN CHEMICALLY  
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**Materials and Manufacturing Processes**, Vol. 14, No  
5, 697-712, (1999)
  
7. TSIPAS D.N.  
**FLITRIS Y.**      «SURFACE TREATMENTS IN FLUIDISED BED  
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**JOURNAL OF MATERIALS SCIENCE, VOL.**  
35, 5493-5496 (2000)
  
8. ZHOU H.  
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GAUTHIER D.  
**FLITRIS Y.**      «DISTINCT ELEMENT METHOD SIMULATION  
OF COAL COMBUSTION IN A BUBBLING  
FLUIDIZED BED»  
**TRANS. OF THE INST. OF CHEM. ING. :**  
**‘CHEMICAL ENGINEERING RESEARCH  
AND DESIGN’ (OCTOBER 2003)**
  
9. D.N. Tsipas,  
K.G. Anthymidis,      “Deposition of hard and/or corrosion resistant,  
single and multielement coatings on ferrous and

**Y. Flitris**

nonferrous alloys in a fluidized bed reactor”

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**Volume (issue): 134 (2) 2003**

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10. D.N. Tsipas,  
K.G. Anthymidis,  
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“Finite element analysis of hot forging with flow softening by dynamic recrystallization “

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11. ANTONETTI P.  
**FLITRIS Y.**  
FLAMANT G.  
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GRANIER B.

« Degradation products of the process of thermal recovery of copper from lamina scraps in Lab-Scale fluidized bed reactor»

**Journal of Hazardous Materials, B108, pp 199-206, (2004)**

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