



*„ Silver bells, silver bells,
It's Christmas time in the city.
Ring-a-ling, hear them ring,
Soon it will be Christmas day.”*

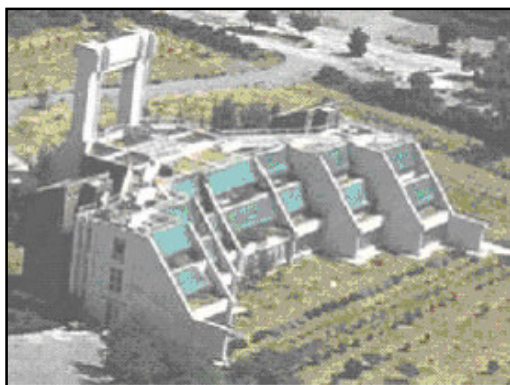
*Please kindly receive heartily felt wishes of
the most merry Christmas ever,
all the possible success, prosperity and satisfaction
in the New –2006- Year*



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SOLAR ENERGY INSTITUTE



The Solar Energy Institute was founded in 1978 for graduate education and research on Solar Energy and its applications. The institute is in service since 1986, established in a passive-heated building which is placed in the campus area of Ege University. Together with solar energy, the other renewable energy subjects (wind energy, biomass, and heat pumps) have begun to be studied in the Institute since 1990. In addition; photochemistry, energy saving, energy efficiency in buildings are among the research fields now.

SOLAR PHOTOCHEMISTRY TECHNOLOGIES GROUP

The topics that are focused on are development and production technology of transparent-flexible Dye Sensitized Solar Cells – DSSC, Organic Light Emitting Diodes – OLED, Organic Field Effect Transistors - OFET (e.g. development of new photoactive materials, thin film preparation technologies, low cost thin-film fabrication, optical properties of inorganic and organic semiconductors, photoelectron transfer process in thin films and solution phases, etc.), photosynthesis, photodegradation and photodisinfection under concentrated sunlight (e.g. mechanism of photosynthesis / photodegradation reactions).

THE GROUP CONSISTS of 1 professor, 4 assistant professors, 13 PhD students, 3 MSc, students and 3 technicians. Regarding the gender balance in SEI, 3 assistant professors, 6 PhD and 2 MSc students are women. The Solar photochemistry group members of SEI have long term experience in executing RTD projects for SMEs.

THE LABORATORY INSTRUMENTS AVAILABLE ARE:

Org. Syn., Str. Determ. & Spect.Lab.; Rotary evaporators, Vacuum pump, Xe and Na lamps, photoreactors, Autoclave, Incubator, FTIR, GC-MS, TGA, UV-VIS and fluorescence spectrophotometer, time-correlated single photon counting instrument,
Thin Film Lab.; Dip coater, spin coater, vacuum evaporator, cyclic voltammeter, lamination device, furnace, solar simulator, dark box, IV measuring system,
Org. Syn.(Out door) Lab.; Solar concentrator (x 1000 sun, FF 3,5-HTC GmbH)

FP6 PROJECT SUPPORTS:

MOLYCELL - Molecular Orientation, Low Band Gap and New Hybrid Device Concepts for the Improvement of Flexible Organic Solar Cells (contract #: STREP-2003-502783) **MOLYCELL** is a 12 partner project, aiming at developing new technologies and materials for the cost effective production of flexible organic dye sensitised solar cells.

THE PROJECT MANAGEMENT EXPERIENCE AND SHORT CURRICULUM VITAE OF THE GROUP HEAD (PROF. DR. SIDDIK ICLI)

is as follows: Prof.Dr.; born in 1947; Director of Ege-SEI; has administrative experience since 1985 (e.g. Ege University (EU) Senate-member 2001- ; TUBITAK-head of Chemistry department 1994-1996; EU Science Faculty (SF) Deputy of Dean 1991-1994; EU SF Board of directors-member 1985-1988); Turkish representative of IUPAC Molecular Spectroscopy, European Photochemistry Association (EPA), and Asian Photochemistry Association (APA); key personnel of the group in FP6-MOLYCELL project; takes part in the Forest Chemicals Review/USA - Technical Referee Board, Turkish Journal of Chemistry - Editorial Board, TUBITAK Vision-2023; gained scholarships from Royal Society-United Kingdom (UK), NATO, C.N.R.S.- France, British Council-UK, Alexander Von Humboldt Stiftung-Germany, has more than 60 SCI manuscripts which were cited more than 300 times, 3 patents, since 1977 he has directed 6 TUBITAK projects, 2 State Planning Organisation projects, 2 NATO projects, 1 EU-AVICIENNE project and more than 10 projects with SMEs.

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Staff Exchange

impressions

FELLOWSHIP IN EUROCENTER IN DANEMARK

My stay in EuroCenter took place a week in September 2005. I was there with Rodica Jurcut (CCIAT-EIC, Romania) and Piotr Czupryński (CUT, Poland).

Our stay in EuroCenter began on Monday, 12th of September 2005 a meeting with Annette Borchenius - the boss of the EuroCenter. She presented us the structure of the network of the EuroCenters in Denmark, how work in EuroCenter is organized, some statistics of their office activities and a little bit of their history. We discussed Regional Contact Points role, the problems in contacts with clients etc.

We had meetings with the whole staff of EuroCenter and it was a great opportunity to compare our organizations with EuroCenter in Copenhagen. We discussed with each person who is responsible for EuroCenter activities (FP6, IRC, Mobility, Craft). We asked how they were solving typical problems

with clients. For example EuroCenter have a special database system to organize data about all their clients. They can manage to contact and check who and when they contacted with.

Our fellowship was a great opportunity for us to present our countries, regions and institutions and also to offer EuroCenter staff cooperation with us and our clients. I brought with me Polish partner search to put on EuroCenter website and to find companies and institutions from Denmark which are interested in cooperation with institutions from my country at FP6 projects.

We had a lot of meetings with clients of EuroCenter, Research Agency, Local Governances Denmark and Inventions & Creativity Center. The most interesting meeting from my point of view was the appointment with the Esbensen – the company which had a project with Polish partners. It was the project with five exemplar energy conscious hospitals and health care buildings designed and constructed throughout Europe. I was curious how they evaluate the cooperation with Polish partners. Summing up that period was the great time when I gained experience, knew Denmark culture and research potencial. During my stay in EuroCenter I knew the whole staff and now I know who I should contact with when I need a partner from Denmark.

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REGinNET *Technology Market* *Partner Search*



<http://www.ideal-ist.net/>



<http://fp6.cordis.lu/fp6/partners.cfm>



<http://www.managenergy.net/submenu/SPs.htm>

TECHNOLOGY OFFERS FROM TURKEY, IRC-EGE

Titanium root form dental implant system (Open) **05 TR TEEU 0DSG**

A Turkish SME has developed a new titanium root form dental implant system. One-piece implants are made of a proven traditional titanium alloy with sandblasted infra-bony surfaces. The system is designed for the easiest operation with minimum variation of implants and tools. The company is seeking a license agreement or a manufacturing agreement in all IRC countries

The Effects of Natural Antioxidants on the Performance and Lipid Oxidation of Meat Enriched with n-3 Polyunsaturated Fatty Acids (N-3 PUFA's) in Broilers **(Open)** **05 TR TEEU 0CZZ**

A group of researchers at a Turkish university has developed a natural feed additive with a new formulation. This additive can be used as an antimicrobial, an antioxidant and a growth promoter in animal nutrition. They are seeking industries for license agreements, technical cooperation and commercial agreements with technical assistance.

**Mobile Security Platform
05 TR TEEU 0CFE**

A Turkish SME has developed a mobile platform to stop the vehicles according to their suspicious character such as terror, bombs etc. The company is seeking partners for technical cooperation or joint venture agreements.

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TECHNOLOGY OFFERS FROM POLAND

SOLENGRID - SOLUTION OF THE ENTROPY ISSUE IN THE POWER GRID

Entropy Law is most ultimate and pervasive law of Nature. There exist an immediate relationship between entropy generation and efficiency and lifetime of a power generating turbine, a transformer, i.e. for all the energy systems which perform far- from- equilibrium. Simple way to express the entropy law in in the power engineering is that in a lubrication system of a turbine, and in a oil tank, the parts and subsystems tend to disintegrate over time. The break, break down, break up, noise, friction, cavitation (or nucleate boiling, or fuel weathering), chemical reactions, water production from oil, rust, die, decay, wear out, transformer oil tank explosions, are generally moving from a state of higher organization to one of lower organization, from order to chaos.

The 2nd Law of Thermodynamics states that every system becomes disordered in time. A huge number of components in a power system interact with each other, sometimes in ways that engineers do not anticipate. In complex, chaotic systems interplay of the components leads to surprising outcomes. The breakdown of the power grids, blackouts and power outages around the world have fed concerns about the reliability of energy systems. It is generally accepted that a consistent theory for complex energy systems far- from- equilibrium does not exist. Deterministic chaos is only one possible consequence; form of self-organisation in which there is an overload of entropy.

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