Awarded Proposals 2012-2013 Cycle

- Design and Analysis of an Energy Management System for Hybrid Electric Vehicles  
  **PI:** Prof. Riad Chedid, FEA  
  Co-PI: Prof. R. Jabr, FEA

- Harvesting energy through Thermo Electrics: Optimizing nanostructures for power generation and cooling  
  **PI:** Prof. Michel Kazan, FAS  
  Co-PI: Prof. Malek Tabbal, FAS

- A Solar Energy Operated Brooder to Improve Food Security of Small-holder Poultry Farmers in Rural Lebanon  
  **PI:** Mohamad Ghassan Abiad, FAFS  
  Co-PI: Prof. Kamel Ghali, FEA

- A Process Engineering Approach to Sustainable Biofuel Synthesis  
  **PI:** Prof. Mohamad Ahmad, FEA  
  Co-PI: Prof. Joseph Zaiter, FEA

- Energy Sector Integration and Pricing Reforms in Lebanon, Jordan, and Syria  
  **PI:** Prof. Isabella Ruble, FAS  
  Co-PI: Prof. Hiba Khodr, FAS

- Joint Optimization of Hydrocarbon PSC Parameters and Revenue Management via Stochastic Programming  
  **PI:** Prof. Joe Naoum-Saway, FEA  
  Co-PI: Prof. Bassel Madah, FEA  
  Dr. Mazen Skaff

Awarded Proposals (2011-2012) Cycle

- Multi-Objective Optimization for Contract Areas Delineation and Sequential Leasing of Lebanon’s Offshore Hydrocarbon Assets  
  **Prof. Ali Yassine**  
  Co-Principle Investigators Profs: Bacel Maddah, Mahmoud Al-Hindi, Dr. Fadi Henri Nader

- Novel Cyclometalated Ruthenium Complexes & Electrolyte Systems for Dye-Sensitized Solar Cells  
  **Prof. Tarek H. Ghaddar**

- Stochastic Optimization of the Water Flooding Process through Front Tracking  
  **Prof. George Saad**  
  Co-Principle Investigators Prof: Prof. Fouad Azizi
The Design and Testing of a Maximum Power Point Controller for a Large PV Generator under Nonuniform Irradiance

**Prof. Sami Karaki**
Co-Principle Investigators Profs: Mohammad Mansour, Rabih Jabr

Calcareous nannofossil biostratigraphy of the Paleocene-Eocene succession of the Chekka Marls (N. Lebanon) and its petroleum prospects

**Prof. Ali T. Haidar**

Towards an Environmentally Clean Charcoal Production

**Prof. Joseph Zeaiter**
Co-Principle Investigators Profs: Elie Shammas, Daniel Asmar

Alternative Techniques for Minimizing the Energy Consumption of Typical Residential Buildings in Lebanon

**Profs: Ghassan Chehab, Kamel Abou-Ghali**
Co-Principle Investigators Prof.: Issam Srour

### Funded Masri Institute Research Projects (2009-2011)


- Tarek Ghaddar, "Synthesis of New Dyes and Their Applications in Dye Sensitized Solar Cells." (Chemistry Department).

- Bilal Kaafarani, "Preparations of Novel Discotic Liquid Crystals for Use in Organic Photovoltaics." (Chemistry Department).
