

Проф. Умберто Дезидери

Изабрани научни и инжењерски резултати

Научни резултати

1. Corradetti, A., Desideri, U., 2006, "A Techno-Economic Analysis of Different Options for Cogenerating Power in Hydrogen Plants Based on Natural Gas Reforming", ASME Journal of Engineering for Gas Turbines and Power, Vol. 129, No. 2, April 2007, pp. 338-351. Најбољи рад, I награда, Coal Biomass and Alternative Fuels of the International Gas Turbine Institute in 2006.
2. Colantoni S., Della Gatta S., De Prosperis R., Russo A., Fantozzi F., Desideri U., 2009, „Gas turbines fired with biomass pyrolysis syngas: analysis of the overheating of hot gas path components“, ASME Paper GT2009-60233, Proceedings of ASME Turbo Expo 2009 Power for Land, Sea, & Air, June, 8-12, 2009, Orlando, Florida, ISBN: 9-7807-9183-8495. ASME Journal of Engineering for Gas Turbines and Power, Vol. 132, No. 6, June 2010. Најбољи рад, I награда, Coal Biomass and Alternative Fuels of the International Gas Turbine Institute in 2009
3. U. Desideri, A. Paolucci, „Performance modelling of a carbon dioxide removal system for power plants“, Energy Conversion and Management 40 (18), 1899-1915, 1999, цитиран 305 пута.
4. U Desideri, S Proietti, G Cinti, P Sdringola, C Rossi, „Analysis of pollutant emissions from cogeneration and district heating systems aimed to a feasibility study of MCFC technology for carbon dioxide separation“, International Journal of Greenhouse Gas Control 5 (6), 1663-1673, 2011, цитиран 163 пута.
5. G Discepoli, G Cinti, U Desideri, D Penchini, S Proietti, „Carbon capture with molten carbonate fuel cells: Experimental tests and fuel cell performance assessment“, International Journal of Greenhouse Gas Control 9, 372-384, 2012, цитиран 58 пута.

Инжењерски резултати

1. **Asia Pro Eco** - Efficient Integration of Renewable Biomass/Wastes Processing - Gasification and clean combustion in particular with downstream gas turbine for bioenergy supply. Industrial park with very low energy consumption and energy integration between the manufacturing and the residential buildings. Финансирала Европска Комисија.
2. **FISR** - New systems for distributed generation based on fuel cells. Design and theoretical and experimental studies of power plants, renewable energy systems, fuel cells and distributed generation systems, energy saving and low-cost and competitive systems based on MCF fuel cells. Финансирао Национални фонд Италије.
3. **LOTUS**—Low Temperature Solid Oxide Fuel Cells for micro-CHP applications. Building and testing a Low Temperature SOFC system prototype based on new SOFC technology combined with low cost, mass-produced, proven components. The use of a modular concept and design practices from the heating appliances bringing the technology towards commercialization. Финансирала Европска Комисија, Оквирни програм FP7.
4. **CONTEX**- Molten Carbonate Fuel Cell catalyst and stack component degradation and lifetime: Reducing the carbon footprint can be achieved by capturing and confining anthropogenic CO₂ emissions as well as by replacing fossil-based fuels with renewable or waste-derived fuels. Fuel cells stack system are one of the most efficient approach to fulfilling the goal of reducing carbon footprint. Финансирала Европска Комисија, Оквирни програм FP7.
5. **GLASUNTES** - New heat storage systems for concentrated solar energy. The effectiveness of Thermal Energy Storage poses Concentrated Solar Power systems is at the forefront first option among all intermittent renewable energy sources. Финансирала Европска Комисија