

CIMTEC 2014 - Symposium FA Fuel Cells: Materials and Technology Challenges

The high consumption of primary energy is one of the characteristics of our modern society. Deterioration of urban air-quality, growing dependence on insecure energy sources, and global warming are forcing the re-examination of conventional energy conversion systems throughout the world. Although new combustion technologies emit far less toxic pollutants comprising hydrocarbons, nitrogen oxides, carbon mono-oxide and particulates than in the past, the increasing energy demand is resulting in growing insistence to reduce pollution. This has brought in emission legislation all over the world, particularly in the light of the Kyoto Protocol, requiring the introduction of new energy conversion

technologies and zero-emission vehicles. Among the various available energy conversion systems, fuel cell technology represents one of the most viable candidate solution to these drawbacks.

Fuel cells deliver energy at high efficiency by consuming electroactive chemicals that are supplied on-demand to the cell as in a conventional thermal combustion system. Fuel cell technology can thus contribute to achieve the targets concerning with reduction of greenhouse gases emissions, increase of renewable power sources and energy efficiency. This complies with the vision for a low carbon economy by 2050. Such vision includes both hydrogen produced through

renewable sources fuelling a fleet of fuel cell vehicles and high efficiency distributed power generation with fuel cells providing electrical power and heat.

The International Symposium "Fuel Cells: Materials and Technology Challenges", through the contribution of experiences coming from several different disciplines, will focus major advances in materials science, processing and device manufacturing of the different fuel cells.

Original papers are solicited on all types of fuel cells. Of particular interest are recent developments of advanced materials, novel stack designs, emerging electrochemical cell technologies, fuel cell for portable, automotive and CHP applications, optimization and breakthroughs in performance. Reviews of the state-of-the-art fuel cell performance for specific applications, including consumer devices, electric vehicles, and distributed energy systems, may also be submitted.

The symposium also includes a workshop on Direct Alcohol Fuel Cells promoted through the DURAMET FCH JU Project.

Informazioni**Luogo:** Montecatini Terme, Italy

Dal: 15 Giugno, 2014

Al: 20 Giugno, 2014

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