

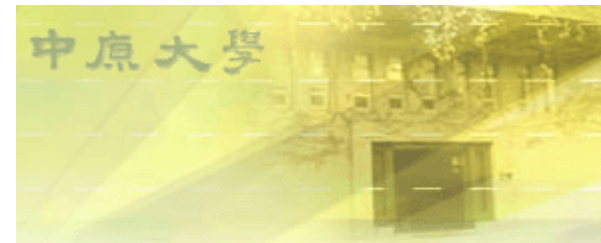
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◆ Research Interests

- ◆ Computational Studies on Surface Catalytic Reaction, Chemical Reaction on Metal Nano-particle, Solid Oxide Fuel Cells, Solar Cells, and Gas Phase Chemistry.

◆ Selected Publications(至多 5 篇)

- ◆ Ren-Jie Lin, Hui-Lung Chen, Shin-Pon Ju, Feng-Yi Li*, and **Hsin-Tsung Chen***, “Quantum-Chemical Calculations on the Mechanism of the Water–Gas Shift Reaction on Nanosized Gold Cluster”, *J. Phys .Chem.C* **2012**, *116*, 336-342.
- ◆ **Hsin-Tsung Chen*** and Jee-Gong Chang, “Computational Investigation of CO Adsorption and Oxidation on Iron-Modified Cerium Oxide”, *J. Phys .Chem.C* **2011**, *115*, 14745-14753.
- ◆ **Hsin-Tsung Chen***, P. Raghunath, and, M. C. Lin*, “Computational Investigation of O₂ Reduction and Diffusion on 25% Sr-doped LaMnO₃ Cathodes in Solid Oxide Fuel Cells”, *Langmuir* **2011**, *27*, 6787 – 6793.
- ◆ **Hsin-Tsung Chen*** and Jee-Gong Chang, “Oxygen Vacancy Formation and Migration in Ce_{1-x}Zr_xO₂ Catalyst: A DFT+U Calculation” *J. Chem. Phys.* **2010**, *132*, 214702.
- ◆ **Hsin-Tsung Chen***, Jee-Gong Chang*, Shin-Pon Ju, Hui-Lung Chen, “Identifying the O₂ Diffusion and Reduction Mechanisms on CeO₂ Electrolyte in Solid Oxide Fuel Cells: A DFT + U Study”, *J. Comput. Chem.* **2009**, *30*, 2433–2442.

◆ Recent Research Projects

- ◆ Theoretical calculations to design and develop highly catalytic metal oxides and nano-size metals for the applications of CO oxidation and water-gas shift reaction as well as the related chemical reaction mechanisms