

Curriculum vitae

Dr. AUROUX, Aline

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Professional experience:

PhD in Physical Sciences, University of Lyon , France

Since 1975 CNRS researcher,

Currently Director of research (DR1 CNRS Emeritus till 2022)

2006 - 2013 Head of the “Clean and Renewable Energies” group of IRCELYON

Main research areas: Catalysis , Catalytic processes, Clean and renewable energies, Clean combustion of hydrocarbons, Hydrogen production and storage , Catalytic reforming, Fuel cells, Heat measurements , Calorimetry, Biomass conversion to hydrocarbons, Biofuels, Interseasonal heat storage.

- Hydrogen production and storage:

- New catalytic materials for fuel cells (reforming of DME, DMM and methane)
- Aluminium hydrides and borohydride compounds for hydrogen production and storage: Application to portable devices. Study of the kinetics and thermodynamics of reversible and irreversible catalyzed systems for H₂ production.
- MgH₂ based materials (with addition of activators such as metal nanoparticles or Ru complexes) for low temperature hydrogen release.
- Study of the poisoning of PEM Fuel Cell membranes

- Catalysts for biofuel production and biomass conversion (conversion of cellobiose, glucose, Guerbet alcohols, nitrilation of fatty acids and esters, conversion of alcohols in acrolein,...).

- Interseasonal heat storage: thermochemical storage in solid composites (including zeolites) and in saline aqueous solutions

Publications: over 317 in international journals. **H-index=48. Citations=8452**

17 book chapters, Editor of one book (2013, Springer Ed) and guest-editor of 3 reviews (Thermochim.Acta).

Presentation at congresses: 63 invited conferences, 174 oral communications, 310 posters.

Training of more than 90 PhD, Postdoc and Master students.

Numerous industrial, European (Inco-Copernicus, Eurobioref, Marie Curie) and national contracts.(10 ANR projects)

Organization of 3 international congresses (CTEC) and 10 international summer schools.in calorimetry and thermal analysis.

Awards: Award “I.G. Murgulescu” of the Romanian Academy of Sciences (2003).

Award CALVET in calorimetry (2007).

Implication in scientific societies :

- Member of SCF (Société Chimique de France) since 1975 and ACS (Am. Chem. Soc.)
- Treasurer of Rhône-Alpes section of French Society of chemistry since 2013 and inter-division Energy since 2015
- Vice-President of Administration Council of French Society of Chemistry (Paris, since 2015)
- Nominated member of Comité National du CNRS (section 14 et CDI 43) de 2004 à 2008.
- Nominated member of CSE 31 de l’Université de Montpellier de 2005 à 2009.