

Jean-Claude Crivello

Curriculum vitae

CMTR-ICMPE-CNRS
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"Deriving thermodynamics from first-principles calculations"

Scientific Experiences

Permanent Affiliation

Since 2008 **Researcher at the French National Center for Scientific Research (CNRS), "Chargé de Recherche"**, *Chimie Métallurgique des Terres Rares (CMTR)*, Institut de Chimie et des Matériaux Paris-Est (ICMPE), UMR 7182, Thiais, France.

International Mobility

2015–2016 **Invitation Fellowship of the Japan Society for the Promotion of Science (JSPS), Pr. Mohri laboratory**, *Institute for Materials Research (IMR)*, Tohoku University, Sendai, Japan, "*Lattice thermodynamics of alloy phase equilibria*".
(10 months)

Previous Post-Doctoral Positions

2007–2008 **"Improvement of the Hydrogen Storage properties of Mg-Al alloys"**, **Pr. Uchida laboratory**, *School of Engineering*, Tokai University, Kanagawa-ken, Japan.

2005–2007 **"Hydrogen Storage in Nano-mixture of Metallic Elements"**, **Pr. Kuji laboratory**, *School of high technology for Human Welfare*, Tokai University, Numazu, Japan.

Education

Jan. 2015 **Habilitation qualification (HDR) in materials science**, *accreditation to supervise research: "Toward an ab initio prediction of phase diagrams"*, Univ. Paris Est, France.

2001–2005 **Doctor in Chemistry and materials science**, (*PhD grade*): "*Study of Thermodynamic and Electronic Properties of Hydrides of Substituted Haucke Compounds*", Univ. Paris XI, Orsay, France.

2000–2001 **Master's degree of metallurgy and materials**, *INSTN-CEA*, Saclay, France.
Specialized fields: Simulations on atomic scale, Interactions matter-radiation

1996–2000 **Degree of University levels in Physics (undergraduate courses)**, *Univ. Paris XII*, Créteil, France.

Teaching Experiences

Since 2010 **Contractor teacher**, *Univ. Paris-Est*, France, 30 h/year: Master degree, Schools.

2004–2005 **Teaching assistant**, (*French ATER*), *Univ. Paris XI*, Orsay, France, 96 h/year.

2001–2004 **Teaching assistant**, (*French monitor CIES*), *Univ. Paris XI*, Orsay, France, 64 h/year.

Management Experiences

Since 2020 Group leader of the "Modelling and Calculation" thematic team in ICMPE

Since 2010 Supervisor of 2 postdoctoral researchers, 6 PhD students, 10 Master students

Scientific Skills

Theoretical approach of a periodic system

- Electronic band structure from DFT calculations
- Lattice vibration contribution by phonon calculation

Thermodynamic modeling of the solid state

- Phase equilibrium assessment by thermodynamic modeling (Calphad method)
- Disordered solution treated by a cluster expansion formalism (SQS, CEM, CVM)

Tools development for material design

- High throughput calculations, combinatorial approaches
- Supervised machine learning

Publications

- 77 publications/proceedings in journals with refereeing procedure
- 2 book chapter
- 12 invited oral communications
- 52 oral communications in international conferences
- 39 oral communications in domestic conferences
- 55 poster communications
- 31 seminars & workshop
- 3 codes under open-source license
- 1 pattern

The exhaustive list of publications are detailed from [this page](#).

In July 2020, the **impact factor is h = 18** according to **Scholar Google** ([See homepage](#))

Awards

- 2019 INC "Emergence @ International" grant for Japan & Korea
- 2017-20 French research and doctoral supervision grant (PEDR)
- 2015 Long term invitation fellowship of the JSPS
- 2009 Mishima Prize awarded by the SF2M (French Metallurgy & Materials Science Union)
- 2006-07 NEDO research fellowship member
- 2005 Prize winner of a Lavoisier purse of the French Ministry for Foreign Affairs

Personal Information

- Birth 1978, May 14th in Paris (38 year-old)
- Status Married, two children, French nationality
- Hobbies Traveling, Photography, Japanese arts, Budo.

Languages

- French Native speaker
- English Fluent *Reading, writing, speaking*
- Japanese JLPT 3 kyū *Read and write basic materials, simple conversation*