

Thermodynamics

TIM Research Team - Molecular Interactions and Thermodynamics

Leader: Prof. [Patrice Malfreyt](https://iccf.uca.fr/annuaire/m-patrice-malfreyt)(<https://iccf.uca.fr/annuaire/m-patrice-malfreyt>)

Research subjects

The Thermodynamics and Molecular Interactions team combines experimental thermodynamics with interpretation through molecular simulation. The lab studies structure-property relationships in fluids and at interfaces, focusing on the link between fundamental aspects of molecular interactions and structures, and macroscopic quantities necessary for the development of new materials, devices and processes. The research topics are [absorbents for CO₂ capture](https://iccf.uca.fr/english-version/research/thermodynamics/gas-absorption-mechanisms)(<https://iccf.uca.fr/english-version/research/thermodynamics/gas-absorption-mechanisms>) and [molecular architectures at interfaces](https://iccf.uca.fr/english-version/research/thermodynamics/molecular-architectures-at-interfaces)(<https://iccf.uca.fr/english-version/research/thermodynamics/molecular-architectures-at-interfaces>) (polymer brushes, friction phenomena). The development of original methods, both experimental and modelling, is a strong competence of the lab. The TIM lab is one of the few French research labs in physical chemistry that puts molecular thermodynamics at the center of their original research.

People

Gas Absorption Mechanisms (MAG)	Molecular Architectures at Interfaces (AMI)
M. Jean-Michel ANDANSON (https://iccf.uca.fr/annuaire/m-jean-michel-andanson)	Christine BONAL (https://iccf.uca.fr/annuaire/christine-bonal)
MME Karine BALLERAT BUSSEROLLES (https://iccf.uca.fr/annuaire/karine-ballerat)	M. Alain DEQUIDT (https://iccf.uca.fr/annuaire/m-alain-dequidt)
M. Yohann COULIER (https://iccf.uca.fr/annuaire/m-yohann-coulier)	M. Julien DEVEMY (https://iccf.uca.fr/annuaire/m-julien-devemy)
M. Jean-Yves COXAM (https://iccf.uca.fr/annuaire/m-jean-yves-coxam)	M. Florent GOUJON (https://iccf.uca.fr/annuaire/m-florent-goujon)
Laurence RODIER (https://iccf.uca.fr/annuaire/laurence-rodier)	M. Patrice MALFREYT (https://iccf.uca.fr/annuaire/m-patrice-malfreyt)

TECHNICAL STAFF

- [Sabine SARRAUTE](https://iccf.uca.fr/annuaire/sabine-sarraute) (<https://iccf.uca.fr/annuaire/sabine-sarraute>) (IE UCA)

<https://iccf.uca.fr/english-version/research/thermodynamics>(<https://iccf.uca.fr/english-version/research/thermodynamics>)