



**UNIVERSITÉ
DE GENÈVE**

FACULTÉ DES SCIENCES

LE DEPARTEMENT DE CHIMIE PHYSIQUE

a le plaisir de vous inviter à la

CONFERENCE

Intitulée

TO JUMP OR NOT TO JUMP THAT IS THE QUESTION

donnée par

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**THEORETICAL AND COMPUTATIONAL CHEMISTRY INSTITUTE FOR
MOLECULES AND MATERIALS
Radboud University Nijmegen (The Netherlands)**

le MARDI 28 OCTOBRE 2025 à 16h30

**SALLE 1S081
Sciences III**

30 quai Ernest-Ansermet ou 4 bld d'Yvoy

Responsable : Prof. Takuji ADACHI

Abstract:

Mechanically responsive molecular crystals can reversibly change shape in response to external stimuli and they offer great potential for applications as actuators and sensors. Particularly interesting are thermosalient crystals, which are crystals that jump or leap upon heating or cooling due to a thermally induced single-crystal-to-single-crystal (SCSC) phase transition. Several cases of jumping crystals have been reported in the literature, but a mechanistic understanding of the underlying phase transition is lacking.

I will show how a combination of experimental and computational studies can help use gaining a better understanding of the underlying mechanism of the thermosalient behavior and finding the reaction coordinate that describes the transition. We can then utilize this knowledge by stimulating this reaction coordinate to photoinduce the transition.