



**Institut d'Alembert Seminar / Thursday, June 12 at 11 a.m.
Amphi Gilbert Simondon – Bât. Sud-Ouest
Niveau 1 – B26**



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**Photoswitchable Hemiindigoids : Design, Properties,
and Applications**

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Abstract :

Hemiindigoids represent a particularly promising class of molecular photoswitches due to their visible-light absorption, rapid isomerization, and bistability. We will present a modular synthetic strategy that enables the introduction of donor or acceptor heterocycles, allowing for precise tuning of their photophysical properties. This approach opens up new perspectives for the development of photoresponsive materials and related applications.

Research interests :

- Design of photoswitchable inhibitors for innovative therapeutics and molecular probes.
- Development of acetylcholinesterase inhibitors and multi-target directed ligands (MTDL) for neurodegenerative disease treatment.
- Synthesis of human acetylcholinesterase reactivators targeting organophosphorus nerve agent poisoning.
- Design of SIP (sphingosine-1-phosphate) receptor agonists (SIP₁₋₅).
- Peptidomimetic compounds for the control of biofilm formation.