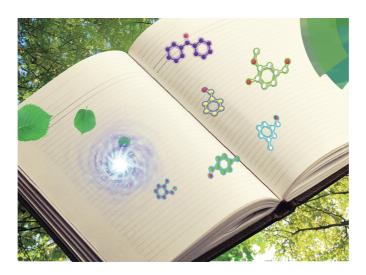


Institute of Physical Chemistry Polish Academy of Sciences

Juan Carlos Colmenares Quintero, Ph.D. D.Sc. Associate Professor Research group leader "Catalysis for sustainable energy production and environmental protection, CatSEE" Kasprzaka 44/52, PL-01 224 Warsaw, Poland

Tel.: +48 22 343 3215 Fax: +48 22 343 3448 icarloscolmenares@ichf.edu.pl http://photo-catalysis.org/

Synthesis of New Materials for Catalysis and Sustainable Chemical Processes (Synteza nowych materiałów dla Katalizy i Zrównoważonych Procesów Chemicznych)



<u>Number of hours per semester:</u> 15 hours divided into nine (9) meetings during the semester.

Lecture language: to choose between English and Polish (language lecture will dependent on the presence of foreign Ph.D. students among the registered people. Slides in English).

Lecture timing and place: Starting from 03.11.2022 and finishing tentatively at 12.01.2023 (nine meetings in total). Every Thursday at 16 p.m., Zoom Platform (virtually).

Registration for the lecture: by e-mail till 27.10.2022 (jcarloscolmenares@ichf.edu.pl).

Method of assessment: attendance + a short final test or "7-min flash presentation of a selected subject in the frame of the lecture content with discussions".

General content of the lecture:

- What do we understand by Green Chemistry and Sustainable Chemical Processes?
- An overview on the fundamentals of catalysis
- Homogeneously Catalyzed Industrial Processes
- Biocatalysis
- Heterogeneously Catalyzed Processes in Industry
- Environmental Catalysis and Green Chemistry
- Catalysis in Novel Reaction Media
- Planning, Development, and Testing of Catalysts
- Future Development of Catalysis and Sustainable Chemical Processes