הטכניון TECHNION
Israel Institute
of Technology
מכון טכנולוגי לישראל

הפקולטה להנדסת מכונות
Faculty of Mechanical Engineering

סמינר - SEMINAR

הנך מוזמן/ת להרצאה סמינריונית של הפקולטה להנדסת מכונות, שתתקיים ביום ב׳ 04.04.22 (ג׳ בניסן תשפ״ב), בשעה 14:30.

הסמינר יתקיים באופן היברידי בחדר ישיבות 217, בנין דן קהאן, באמצעות הזום :
https://technion.zoom.us/j/95446727090#success

The seminar will be held in a hybrid format: Dan Kahn Building, Room 217, Technion, and via Zoom, at link: https://technion.zoom.us/j/95446727090#success

מרצה:

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על הנושא:

Integrated Thermocatalytic Systems for Generation of Synthetic Fuels from CO$_2$ using Renewable Energy

The seminar will be given in English

להלן תקציר ההרצאה:

Thermocatalytic treatment of CO$_2$-rich feedstocks (e.g., biogas, landfill gas, industrial flue gases) is an attractive route for generating Renewable Synthetic Fuels. To make the process of thermocatalytic conversion sustainable, heat (required for endothermic reactions) and hydrogen (required for CO$_2$ hydrogenation) should have a negligible carbon footprint. These requirements are achievable if heat is provided by solar irradiation and hydrogen is generated using renewable (nuclear) power. However, a number of technological issues remain to be resolved, including challenges associated with thermal management and system integration. This talk outlines recent advances in our group with respect to the thermocatalytic generation of hydrogen (H$_2$) and renewable natural gas (RNG), while incorporating renewable energy into the process. The focus is on thermal management, advanced reactor design and system integration. Results of numerical simulations are presented, as well as experimental proof-of-concept. Techno-economic assessment is also briefly discussed. Altogether, our recent developments provide new insights into the practical implementation of CO$_2$ capture and utilization (CCU).

מארח : פרופ׳ח מתי סאס

בברכה,

פרופ״ח מתי סאס
מרכז הסמינרים