



KEMIJSKI INŠTITUT

Vabilo na Forum40 / Invitation to the Forum40

**Dr. Petar Djinović**

D09, Department of Inorganic Chemistry and Technology

Četrtek / Thursday, 26. 1. 2023 ob / at 13:00

Velika predavalnica Kemijskega inštituta / Great Lecture Hall

WEBEX

<https://ki-ljubljana.webex.com/ki-ljubljana/j.php?MTID=m84a1aa0d387b8a640dee54292a269894>

Join by meeting number (access code): 2731 514 5632

Meeting password: 4FkZGhpSn36

## Photo-thermal catalysis for CO<sub>2</sub> reduction

Catalytic processes for CO<sub>2</sub> conversion to useful chemicals such as CO, methane and methanol could play an important role for counteracting anthropogenic CO<sub>2</sub> emissions. However, these processes are currently enabled by energy, coming from fossil fuel combustion. By using a combination of visible light and thermal energy as energy sources, the abovementioned reactions can be sustained at much lower temperatures compared to thermally driven reactions, and light can be used to leverage reaction selectivity. In addition to influencing the reaction mechanism and decreasing the apparent activation energies, accelerating reaction rates and boosting selectivity beyond thermodynamic limitations is possible.



Vljudno vabljeni / Kindly invited