



## **Keep-in-Touch meeting (April 29, 2022)**

### **Overview of the newly funded scientific projects in the N-PRiME group**

Tiago Silva

*Instituto de Plasmas e Fusão Nuclear, Instituto Superior Técnico, Universidade de Lisboa, Portugal*

In this talk I will present an overview of recently funded scientific projects in the N-PRiME group. These projects include: (i) ROADMARS (funded by Portuguese National funds) to investigate the interest and feasibility of microwave discharges to decompose CO<sub>2</sub> and produce oxygen under Martian conditions, (ii) PARADISE (funded by Portuguese National funds) to explore the potential of plasma technology to reform industrial emissions into solar fuels, (iii) PERFORMER (funded by ESA) to study the separation of oxygen in CO<sub>2</sub> discharges, and (iv) IMPACT and CREATOR (funded by MIT Portugal Research seed Funds) to investigate elementary processes involved in CO<sub>2</sub> plasma recycling, while fostering collaborative research between MIT and the N-PRiME group.

The seminar will cover the main workpackages of these projects, report the current status of the experimental and modelling work and address steps and future goals related to plasma-based CO<sub>2</sub> reforming.