



UNIVERSITÀ  
DI TRENTO

Dipartimento di  
Fisica

# RICORDANDO Nicola

Venerdì 17 Maggio

ore 14.30, aula A207

Nicola Gatti, brillante allievo del Dipartimento di Fisica, dopo aver conseguito la laurea magistrale nel 2014 e il dottorato di ricerca 2018, ci ha lasciato prematuramente il 10 maggio 2023.

Ad un anno dalla scomparsa, amici e colleghi del Dipartimento lo ricordano.

**Paolo Tosi**

*Il percorso scientifico e umano di Nicola Gatti*

**Gerhard van Rooij**

Department of Circular Chemical Engineering, Maastricht University:

**Plasma Technology to aid the Energy and Material Transition of the Process Industry**

A carbon-neutral and circular economy will rely on the utilization of waste materials and biomass as feedstock for the production of new materials. Its energy input must have a zero carbon footprint, which implies intermittent electricity. Some of the challenges encountered in the transition towards such an economy may be addressed by plasma technology. Particularly its compatibility with (intermittent) sustainable energy and unique opportunities for efficiency and/or selectivity in reactions with CO<sub>2</sub>, N<sub>2</sub>, and CH<sub>4</sub> inspire our research in the context of the Dutch process industry. This presentation discusses the use cases of CO<sub>2</sub> activation for the synthesis of fuels and chemicals and CH<sub>4</sub> valorization via carbon coupling to illustrate the plasma opportunities. These insights are used to draft a roadmap for industrial implementation of the technology for the direct production of ethylene (C<sub>2</sub>H<sub>4</sub>), an important building block for the chemical industry.

**Intervengono:**

Leonardo Ricci

Luca Matteo Martini

Gabriele Ferrari

... e quanti desiderano esprimere il loro personale ricordo

**Contatti**

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