

Trento, 26 February - 1 March 2024

Inaugural workshop on Nuclear Astrochemistry

In this workshop we plan to introduce the ideas of a new interdisciplinary field 'Nuclear astrochemistry'. This brings together disparate fields of nuclear physics with the rapidly emerging field of astrochemistry to explore the processes of star formation (and death) and planet formation and how they create the conditions that may allow life to evolve and be sustained. In the workshop, the first of its kind, we will bring together leading experts in these fields together with early career researchers who will develop this new field through observations (using JWST), theoretical models and simulations and laboratory studies to address the fundamental questions of how the elements and molecules of life are created in the universe and the consequences for the search for life beyond Earth and our solar system.

Organizers

Nigel Mason (University of Kent, Atomki Institute for Nuclear Research, and Europlanet), Daniel Bemmerer (HZDR and ChETEC-INFRA), Eliana Masha (HZDR), Duncan Mifsud (Atomki Institute for Nuclear Research)

Speakers

Bertram Bitsch (Max-Planck-Institut für Astronomie), Jana Bockoka (Université Côte d'Azur), Mattias Ek (ETH Zürich), Federico Ferraro (INFN · Laboratori Nazionali del Gran Sasso LNGS), Wolf Geppert (University of Stockholm), Camilla Hansen (Max-Planck-Institut für Astronomie), Eric Herbst (University of Virginia), Keyron Hickman-Lewis (University of Orleans and Natural History Museum UK), Sergio Ioppolo (Aarhus University), Maria Lugardo (Konkoly Observatory), Eliana Masha (Helmholtz-Zentrum Dresden-Rossendorf - HZDR), Eva Matteo (Centro de Astrobiología - CAB), Duncan Mifsud (Atomki Institute for Nuclear Research), Stephen Mojzsis (Hungarian Academy of Sciences), Heidy Quitian-Lara (Universities of Kent and Colombia), Heike Rauer (Freie Universität Berlin), Paul Rimmer (University of Cambridge), Aldo Serenelli Consejo Superior de Investigaciones Científicas - CSIC)

Director of ECT*: Professor Gert Aarts

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