



Union Internationale Pour La Science, La Technique et Les Applications du Vide
International Union for Vacuum Science, Technique and Applications
Internationale Union für Vakuum Forschung, Technik und Anwendung

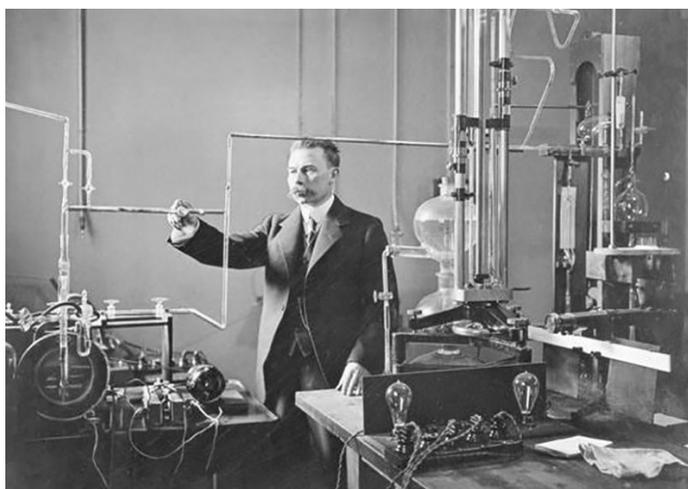
IUVSTA/IOP Publishing Webinar coming soon

Martin Knudsen: a pioneer in gas flows

by Prof. Jørgen Schou

Join the audience for a live webinar at 1 p.m. BST/2 p.m. CEST on 10 May 2022 exploring the career and influence of a pioneer in gas flows, Martin Knudsen

<https://physicsworld.com/a/martin-knudsen-a-pioneer-in-gas-flows/>



Martin Knudsen at work in a laboratory
(Courtesy: University of Copenhagen, Denmark)

The Danish physicist Martin Knudsen (1871–1949) has just passed his 150th anniversary. Growing up, he worked as a shepherd during the summer and finished his career as a professor in physics and president at the University of Copenhagen.

In the period from about 1910 to 1920 he was investigating the behaviour of the gas flow in low-pressure systems, in which the mean-free distance and dimensions of the vacuum system were comparable.

He introduced several concepts, the Knudsen Number, Knudsen gas, (Hertz-)Knudsen equation and Knudsen cells, which are still used today. The influence that Knudsen had on recent work will also be outlined.

Free to register at <https://register.gotowebinar.com/register/8678554552028097803>



Jørgen Schou graduated in 1980 at the University of Copenhagen, Denmark, with a study on electron- and ion-induced secondary electrons. In the following years, until 2007, he worked as a staff member of the physics department at Risø National Laboratory with the main emphasis on sputtering of volatile targets by ion and electron beams. The latest 10 years he worked as group leader at the Technical University of Denmark (DTU) mostly on photovoltaic films and retired in 2021 after having obtained the world record efficiency for CZTS-silicon tandem cells of about 7% as a coordinator for a major innovation project.

Sponsored by IUVSTA and Hiden Analytical





Union Internationale Pour La Science, La Technique et Les Applications du Vide
International Union for Vacuum Science, Technique and Applications
Internationale Union für Vakuum Forschung, Technik und Anwendung

IUVSTA/IOP Publishing Webinar coming soon

Vacuum technology for mimicking cosmic-dust formation in dying stars

by Prof. Jose A Martín Gago

Join the audience for a live webinar at 3 p.m. BST/4 p.m. CEST on 11 May 2022 exploring the latest vacuum technology used in the analysis of clusters and nanoparticles

<https://physicsworld.com/a/vacuum-technology-for-mimicking-cosmic-dust-formation-in-dying-stars/>

Cosmic dust grains are believed to play an essential role in the emergency of chemical complexity in the universe. In particular, it may catalyze new chemical reactions with the circumstellar and interstellar gasses and therefore, dust-grain surfaces may contribute to the synthesis of the large variety of molecular species found in the interstellar medium. Albeit its importance, much remains unknown on the cosmic-dust formation processes, and high- and ultra-high-vacuum technologies may provide an excellent workbench for these studies.

In this webinar, we present the STARDUST machine, an innovative experimental station devoted to the engineering, production, manipulation, processing and in situ analysis of a wide variety of clusters and nanoparticles, particularly designed to mimic the travel of cosmic-dust seeds from their formation towards the interstellar medium. Its original design offers unique possibilities for nanoparticle growth with high throughput and controlled size and elemental composition. These highly controlled nanoparticles can also be used in other fields, like catalysis or medicine.

Free to register at <https://register.gotowebinar.com/register/5723114575721571596>



Jose A Martín Gago, research professor at ICMM-CSIC from 2012, obtained a PhD in physics funded by ESRF, Grenoble. He held a post-doctoral fellowship at synchrotron LURE-CNRS, Orsay, France, with a Marie-Curie fellowship. For six months during 2020–2021, he was invited professor at FZU-mobility program at the Institute of Physics of the Czech Academy of Sciences.

Jose is a member of important international scientific committees, such as the program scientific board of the large installation facilities: ESRF (Grenoble), ELETTRA (Italy) and ALBA (Barcelona). From 2010, he has been the Spanish representative in the executive council of the International union of vacuum science and technique and applications (IUVSTA). Jose also leads the ESISNA group (Interdisciplinary studies based on nanoscopic systems).

Sponsored by IUVSTA and Hiden Analytical

