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ÖAW AUSTRIAN ACADEMY OF SCIENCES

ÖPG Österreichische Physikalische Gesellschaft

LISE MEITNER LECTURE

GENERATING HIGH-INTENSITY, ULTRASHORT OPTICAL PULSES

With the invention of lasers, the intensity of a light wave was increased by orders of magnitude over what had been achieved with a light bulb or sunlight. This much higher intensity led to new phenomena being observed, such as violet light coming out when red light went into the material. After Gérard Mourou and I developed chirped pulse amplification, also known as CPA, the intensity again increased by more than a factor of 1,000 and it once again made new types of interactions possible between light and matter. We developed a laser that could deliver short pulses of light that knocked the electrons off their atoms. This new understanding of laser-matter interactions, led to the development of new machining techniques that are used in laser eye surgery or micromachining of glass used in cell phones.

DPG

Meitner Lise Lectures ML

APRIL 25, 2023
6.00 PM
AUSTRIAN ACADEMY OF SCIENCES
FESTIVE HALL
DR. IGNAZ SEIPEL-PLATZ 2, 1010 VIENNA

PROGRAM

SLIDESHOW

Lise Meitner and ‚her daughters': female physicists introduce themselves

WELCOME

Ulrike Diebold | Vice President of the Austrian Academy of Sciences
Joachim Ullrich | President of the German Physical Society
Christian Teichert | President of the Austrian Physical Society

INTRODUCTION

Monika Ritsch-Marte | Director of the Institute of Biomedical Physics, Medical University of Innsbruck

LECTURE

Donna Strickland | Professor, Department of Physics & Astronomy, University of Waterloo
Generating High-Intensity, Ultrashort Optical Pulses

Moderation: **Monika Ritsch-Marte**

Donna Strickland is a professor in the Department of Physics and Astronomy at the University of Waterloo and is one of the recipients of the Nobel Prize in Physics 2018 for developing chirped pulse amplification with Gérard Mourou, her PhD supervisor at the time. They published this Nobel-winning research in 1985 when Strickland was a PhD student at the University of Rochester.
In 1997, she joined the University of Waterloo, where her ultrafast laser group develops high-intensity laser systems for nonlinear optics investigations. She was named a 2021 Hagler Fellow of Texas A&M University and sits on the Growth Technology Advisory Board of Applied Materials.
Strickland served as the president of the Optica (formerly OSA) in 2013 and is a fellow of Optica, SPIE, the Royal Society of Canada and the Royal Society. She also is an international member of the US National Academy of Science.

Please register at: *https://www.oeaw.ac.at/veranstaltungen/anmeldung/lml*

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