



Molecular Electron Dynamics investigated by Intense Fields and Attosecond Pulses

**MEDEA** is a Marie Skłodowska-Curie Innovative Training Networks (ITN-ETN) funded in the framework of the HORIZON 2020 program. The main objective of the MEDEA proposal is to create a platform where Early Stage Researchers will receive an inter-disciplinary and inter-sectoral comprehensive research training in one of the major field of Photonics that will be contributed by leading universities and research centers, and by key-player companies in the development and commercialization of state-of-the-art ultrafast laser sources and detection systems.

Well-designed activities will be offered by the network to enhance the Early Stage Researchers' career perspectives in both the academic and private sector, with a particular attention to high-quality training in research, innovation, management and entrepreneurship as well as communication skills.

Through their research activities Early Stage Researchers will contribute to the advance of attosecond and intense femtosecond extreme ultraviolet spectroscopy combining in-depth investigation of fundamental electronic processes in simple systems with experiments in complex molecules with potential impact in chemistry, surface science, and biology.

MEDEA features ten academic institutions, two large-scale facilities, six industrial companies, and two outreach partners, from seven European countries.

### Eligibility criteria

Applicants shall, at the time of recruitment by the host organisation, be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree.

Applicants can be of any nationality. They are required to undertake transnational mobility (i.e. move from one country to another) when taking up their appointment. At the time of recruitment by the host beneficiary, researchers must not have resided or carried out their main activity (work, studies, etc.) in the country of their host beneficiary for more than 12 months in the 3 years immediately prior to the reference date.

Applications from female candidates are strongly encouraged.

### Fellowship

The gross amount salary will be composed by a monthly living allowance: (€ 3,110 / month adjusted through the application of a correction coefficient for the cost of living of the hosting country) and a mobility allowance (€ 600 / month). Depending on the researcher's family situation at the recruitment date also a family allowance (€ 500 / month) could be paid.

### 15 Early Stage Researchers positions (36 months duration)

- ✓ **Politecnico di Milano, Italy**
  - ◆ "Nonlinear XUV excitation of dimers and clusters"
  - ◆ "Alignment and HHG imaging of nonplanar molecules"
- ✓ **Max Born Institute, Germany**
  - ◆ "Attosecond XUV pump-XUV probe spectroscopy"
  - ◆ "Imaging of hole dynamics in polyatomic molecules"
- ✓ **University of Lund, Sweden**
  - ◆ "High repetition rate attosecond source for experiments with full energy, angular and temporal resolution"
  - ◆ "Ultrafast molecular dynamics studied using photoelectron diffraction techniques"
- ✓ **Deutsches Elektronen Synchrotron, Germany**
  - ◆ "Attosecond dynamics in conformer-selected amino acids"
- ✓ **Max Planck Institute for Quantum Optics, Germany**
  - ◆ "Electron delocalization at the molecule-surface interface"
- ✓ **Aarhus University, Denmark**
  - ◆ "Kinetic energy release spectra in dissociative ionization of diatomic molecules"
  - ◆ "Ultrafast dynamics of doped helium droplets"
- ✓ **Amplitude Technologies, France**
  - ◆ "CEP-stabilized multi-kHz regenerative amplifiers for attosecond experiments"
  - ◆ "High-energy CEP-stable pulses for nonlinear XUV spectroscopy"
- ✓ **Commissariat à l'énergie atomique et aux énergies alternatives, France**
  - ◆ "Hole oscillation in diatomic and triatomic molecules"
- ✓ **Foundation for Research and Technology-Hellas, Greece**
  - ◆ "XUVpump-XUV probe of electron correlation in H<sub>2</sub>/D<sub>2</sub>"
- ✓ **Femtolasers, Austria**
  - ◆ "Generation of mid-IR CEP-stabilized pulses"

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