Center for Advancing Electronics Dresden

The Junior Research Group "Single Molecule Machines" offers a fixed-term position as

**Research Associate / PhD Student**

*(subject to personal qualification employees are remunerated according to salary group E 13 TV-L)*

**Research area:** On-surface synthesis and investigation of functional molecules by scanning tunneling microscopy at low temperature

**cfaed Investigators:** Dr. Francesca Moresco

**Terms:** 75% of the fulltime weekly hours, the position is a 3 years appointment (with the option to be extended) and starts as soon as possible. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz – WissZeitVG). The position offers the chance to obtain further academic qualification (e.g. PhD).

**Tasks:**
- Investigation of functional molecules and nanostructures on surface
- Scanning tunneling microscopy and spectroscopy in ultrahigh vacuum at low temperature
- On-surface synthesis and local chemical reactions
- Atomic and molecular manipulation
- Study of local electronic properties for application in atomic-scale electronics.

Please visit [www.cfaed.tu-dresden.de/francesca-moresco-group/home](http://www.cfaed.tu-dresden.de/francesca-moresco-group/home) for more information on our activities.

**Requirements:**
- an outstanding university degree (master or equivalent) in physics, chemistry, nanotechnology or a closely related area;
- knowledge in the field of experimental surface science, physical chemistry, ultra-high vacuum;
- very good interpersonal and communication skills; in particular, the ability to effectively work in collaborative research efforts;
- an independent, target- and solution-driven work attitude;
- inter- and multidisciplinary thinking;
- fluency in English - written and oral.

**We offer:**
You will join a team of enthusiastic scientists who pursue creatively their individual research agenda inspired by cfaed’s innovative approach and support.
Your research will be fostered by the cfaed philosophy to promote young researchers, which includes:
- access to state of the art research of leading academic institutes,
- International doctoral program,
- promotion of gender equality and family-friendly work environment.

Informal enquiries can be submitted to Dr. Francesca Moresco, Tel +49 (351) 463 43968; Email: francesca.moresco@tu-dresden.de.

Applications from women are particularly welcome. The same applies to people with disabilities.
**Application Procedure**

Your application *(in English only)* should include: motivation letter, CV, copy of degree certificate, transcript of grades (i.e. the official list of coursework including your grades) and proof of English language skills. Complete applications should be submitted preferably via the TU Dresden Secure-Mail Portal [https://securemail.tu-dresden.de](https://securemail.tu-dresden.de) by sending it as a single pdf-document quoting the reference number **PhD2001_Poly** in the subject header to recruiting.cfaed@tu-dresden.de or by mail to TU Dresden, cfaed, z. Hdn. Anne Schulze, Helmholtzstr. 10, 01069 Dresden. The closing date for applications is **25.02.2020** (stamped arrival date of the university central mail service applies). Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

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**Reference to data protection:** Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: [https://tu-dresden.de/karriere/datenschutzhinweis](https://tu-dresden.de/karriere/datenschutzhinweis)

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**About cfaed**

Cfaed is a central scientific unit of TU Dresden, and brings together 300 researchers from the university and 10 other research institutes in the areas of Electrical and Computer Engineering, Computer Science, Materials Science, Physics, Chemistry, Biology, and Mathematics. cfaed addresses the advancement of electronic information processing systems through exploring new technologies which overcome the limits of today's predominant CMOS technology. For more information please see [www.cfaed.tu-dresden.de](http://www.cfaed.tu-dresden.de)

cfaed has created seven new Professorships at TU Dresden to further strengthen cfaed's research areas. These strategic positions were filled with distinguished scientists to enhance the Cluster's research output and increase its international reputation.

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**About TU Dresden**

The TU Dresden is among the top universities in Germany and Europe and one of the eleven German universities that were identified as an ‘elite university’ in June 2012 and confirmed in 2019. As a modern full-status university with 18 faculties it offers a wide academic range making it one of a very few in Germany.