The Cluster of Excellence ‘Center for Advancing Electronics Dresden’ (cfaed) offers a position as

**Research Associate / PhD Student**

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

**Research area:** Investigating Polymorphism in Organic Semiconductors

**cfaed Investigators:** Prof. Stefan Mannsfeld

**Terms:** starts asap, 65% of the fulltime weekly hours, the position is a 3 years appointment (with the option to be extended). 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).

**Position and Requirements**

The “Chair of Organic Devices” works towards the long-term vision to transfer Organic Electronics device technologies from the lab to commercially competitive applications in the consumer markets. The performance of organic semiconductor layers is often a limiting factor in devices such as transistors. The tendency of the structurally rather complex organic semiconductor molecules to form multiple stable motifs of molecular packing (polymorphs) makes it important to understand and control which polymorph of a material forms in the electrically active layer of a device. **This PhD research is part of a joint experimental-theoretical research effort (DFG project RHODOS) that studies polymorphism in organic semiconductor materials.** In this experimental portion, synchrotron X-ray scattering is used to study polymorphism in well-known and novel high-performance materials. The successful candidate will: use the solution-shearing coating method to fabricate highly crystalline films of organic semiconductor materials; perform ex-situ and in-situ annealing/cooling synchrotron X-ray scattering experiments; thoroughly electrically characterize solution-shearing coated thin films by employing them as active layers in organic field effect transistors (OFETs).

We aim at attracting the best talent in the respective research fields and look for: an outstanding university degree (master, diploma or equivalent) in chemistry, physics, electronics, materials science or related field of physical sciences; prior experience with hard X-ray or electron scattering on thin film samples or experience in similar spectroscopic methodologies involving thin film samples is also sufficient; ideally, the candidate also has prior experience in soft material thin film deposition processes and/or fabrication of thin film electronics devices; 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; interdisciplinary thinking; strong motivation and interest to join one of the most ambitious interdisciplinary research clusters; fluency in English - written and oral.

**What we offer**

You will join a team of enthusiastic scientists who pursue creatively their individual research agenda inspired by the cluster’s innovative approach and support. Your PhD 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; individual supervision by a Thesis Advisory Committee; promotion of gender equality and family-friendly work environment.
Informal enquiries can be submitted to Prof. Mannsfeld, Tel +49 (351) 463 39923; Email: stefan.mannsfeld@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 SecureMail Portal https://securemail.tu-dresden.de by sending it as a single pdf document to recruiting@cfaed@tu-dresden.de quoting the reference number Rhodos-1802 in the subject header or alternatively to TU Dresden, cfaed, Frau Dr. P. Grünberg, 01062 Dresden, Germany. The closing date for applications is 27.03.2018 (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.

**About cfaed**

cfaed is a cluster of excellence within the German Excellence Initiative. It brings together 200 researchers from TU Dresden and ten other research institutions 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. www.cfaed.tu-dresden.de

cfaed has initiated to create five new Professorships at TU Dresden to further strengthen cfaed's research areas. These strategic positions are being filled with distinguished scientists to enhance the Cluster's research output and increase its international reputation. The Chair of Organic Devices is one of these new positions and will contribute to the Organic/Polymer Path.

**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. As a modern full-status university with 14 departments it offers a wide academic range making it one of a very few in Germany.