The **Brandenburg University of Technology (BTU) Cottbus-Senftenberg** is a research-oriented university that combines its role as the central university of Lusatia with a strong international perspective. It offers a combination of basic and application-oriented research with a focus on environment, energy, materials, construction, health, as well as information and communication technology.

In joint appointment with the **Leibniz Institute for Crystal Growth (IKZ)** Berlin, the **Faculty of Mathematics, Computer Science, Physics, Electrical Engineering and Information Technology** invites applications for a

Professorship in Nanostructures, 2D-Systems and Layers (W3)

in personal union with the

management of the IKZ department “Nanostructures and Layers”

This chair is intended to advance the development of long-term perspectives in the field of crystalline nanostructures, 2D systems and thin films and to provide a future-proof strategic positioning of the IKZ & the BTU in this field via physical-chemical synthesis methods.

Through the targeted application of processes in surface physics and surface chemistry, research activities in the context of the synthesis of nanostructures, 2D-systems & coatings are to be advanced, in order to enable, for example, the control of self-limiting growth and structure formation processes on the nanometer scale (e. g. monolayer limitation). These research activities focus on the elucidation of fundamental phenomena as well as on the further development of materials and technologies for specific applications. Apart from existing projects (SiGe quantum materials, ferroelectric layers, gallium oxide power electronics, twisted perov-skite systems, etc.), concepts for innovative synthesis methods (growth and layer transfer approaches) and for new types of crystalline materials (epitaxial or stacked material combinations from the field of 2D materials, semiconductors and oxides) are to be researched.

The professorship will be based at the IKZ (Berlin-Adlershof) and will comprise the management of the department “Nanostructures and Layers”. The joint professorship will be filled according to the Jülich model and includes the obligation to teach courses of at least two semester hours per week at the BTU. Lectures/courses are also to be held in English. The professorship is to strengthen the cooperation in research between the IKZ and the BTU. This refers in particular to the use of new materials in prototypical components in close cooperation with the Forlab FAMOS as well as joint research projects for the elucidation of processes in sur-face physics, as well as their spectro-microscopic characterization. Further opportunities exist in the field of digitalization of materials science through data analysis methods using Big Data and artificial intelligence (AI).

Eligible candidates are expected to have an internationally proven scientific track record and to have distinguished themselves in the material synthesis (growth (e. g. MBE, PLD, CVD) and/or layer transfer (e. g. 2D materials, microstructures)) of innovative crystalline materials with potential for technological applications in electronics and photonics over the last few years. Excellent knowledge in the field of modern material characterization (laboratory and/or synchrotron methods) is another important criterion for a successful application. Know-how and willingness to collaborate in the field of digitalization of materials science are an additional advantage. Outstanding communication skills to facilitate collaboration in the Berlin-Brandenburg research area are a must. The applicant should have held leadership positions in research and development and gained experience in the procurement of third-party funding as well as in the implementation of

Die BTU trägt das Gütesiegel des Deutschen Hochschulverbandes (DHV). Sie wird damit für ihre fairen und transparenten Verhandlungen zur Berufung von neuen Professorinnen und Professoren ausgezeichnet.

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third-party funded projects. The research topics should be relevant to the DFG, BMBF, BMWK, or comparable international EU research funding institutions.

For further information, please contact Prof. Dr. Götz Seibold, phone: +49 355 69-3006 / email: seibold@b-tu.de as well as Prof. Dr. Thomas Schröder, phone: +49 30 6392-3000 / email: thomas.schroeder@ikz-berlin.de.

Other duties result from the requirements set by § 42 Brandenburgisches Hochschulgesetz (Higher Education Act of the State of Brandenburg - BbgHG) in conjunction with § 3 BbgHG. Please refer to §§ 41 paragraph 1 no. 1 - 4a and 43 BbgHG for Prerequisites and conditions of employment.

BTU Cottbus-Senftenberg is committed to equal opportunities and diversity and strives for a balanced gender ratio in all employee groups. Women are especially encouraged to apply. Persons with a severe disability and their equals are given priority in the case of equal suitability.
As a family-oriented University, BTU offers a Dual-Career-Services.

The application, including academic certificates, curriculum vitae, a list of publications, as well as proof of teaching experience, should be sent by e-mail in a single pdf file with a max. 7 MB until **06.03.2023** to:

Dean of the Faculty of Mathematics, Computer Science, Physics, Electrical Engineering and Information Technology
BTU Cottbus - Senftenberg, Postfach 101344, 03013 Cottbus

Email: fakultaet1+bewerbungen@b-tu.de

When sending your application by unencrypted e-mail, please be aware of the risks regarding the confidentially and integrity of your application content and please also note the data protection information on the BTU website.