

Professor in Nanofabrication

DTU Fotonik, Department of Photonics Engineering at Technical University of Denmark (DTU), invites applications for an open position as professor in Nanofabrication.

DTU Fotonik is the department of light science and technology and has research activities covering the range from fundamental materials research to optical communication technology and new applications enabled by photonics. The professor will be affiliated with the Nanophotonics Section which emphasizes research on semiconductor and integrated photonics, micro- and nanocavity lasers, quantum photonics, plasmonics, and metamaterials.

The successful candidate is expected to perform leading-edge research on the development of new nanofabrication techniques, their use for realizing advanced nanophotonic structures and integrated photonic devices, as well as experimental characterization of materials and devices.

Responsibilities and tasks

DTU Fotonik seeks a professor with expertise in the following areas:

- Extensive experience in teaching theoretical and experimental courses
- Epitaxial growth (primarily MOVPE) of low-dimensional semiconductor materials, i.e., quantum wells and quantum dots, and their application in semiconductor lasers and nanophotonic structures.
- E-beam lithography, e.g. with application to photonic crystals or other nanophotonic structures
- Design, fabrication, and advanced experimental characterization of active and passive semiconductor devices for integrated photonics
- Deep knowledge of the physics of advanced opto-electronic devices.
- Good understanding of application requirements within, e.g., communications and/or biophotonics.

Collaboration with other groups within and outside the department is strongly encouraged. The successful candidate is expected to have an outgoing role in seeking and promoting new applications of the developed nanofabrication tools.

Candidates are expected to formulate a vision for the future development of the research field of nanofabrication as well as identifying promising areas of application.

The successful candidate is expected to take a lead position in teaching at the BSc, MSc, and PhD levels. For international candidates, DTU offers Danish language courses for the purpose of being able to teach in Danish within the first 2-3 years.

Qualifications

Candidates should already have obtained well-documented international recognition within their research field. Employment requires original research at the highest international level.

The successful candidate must be able to document substantial experience with teaching at the BSc, MSc, and PhD levels within the areas of fabrication technology and semiconductor photonics.

Assessment

In the assessment of the candidates, consideration will be given to

- Experience and quality of teaching and curriculum development
- Research impact and experience, funding track record, and research vision
- Societal impact
- Documented innovation activities, including commercialization and collaboration with industry
- International impact and experience
- Leadership and collaboration
- Communication skills

We offer

DTU is a leading technical university globally recognized for the excellence of its research, education, innovation and scientific advice. We offer a rewarding and challenging job in an international environment. We strive for academic excellence in an environment characterized by collegial respect and academic freedom tempered by responsibility.

Salary and terms of employment

The appointment will be based on the collective agreement with the Danish Confederation of Professional Associations. The allowance will be agreed with the relevant union.

Further information

Further information may be obtained from Head of Department Lars-Ulrik Aaen Andersen, tel.: +45 4525 3816.

You can read more about DTU Fotonik on www.fotonik.dtu.dk

Application procedure

Please submit your online application no later than **XXX 2018 (local time)**. Apply online at www.career.dtu.dk.

Applications must be submitted as **one PDF file** containing all materials to be given consideration. To apply, please open the link 'Apply online', fill in the online application form, and attach **all your materials in English in one pdf file**. The file must include:

- Application (cover letter) addressed to the President
- CV
- A vision for future research
- Views regarding teaching and research based on the "Assessment" bullets
- Documentation of precious teaching and research based on the "Assessment" bullets
- List of publications indicating scientific highlights
- H-index, and ORCID (see e.g. <http://orcid.org/>)
- Diploma (MSc/PhD)

Applications and enclosures received after the deadline will not be considered.

All interested candidates irrespective of age, gender, disability, race, religion or ethnic background are encouraged to apply.