



**Associate Professor in Surface and Interface Science and Characterisation of Advanced  
Materials/Nanomaterials  
Faculty of Science & Health  
SCHOOL OF PHYSICAL SCIENCES  
(Permanent Position)**

**Introduction**

Dublin City University ([www.dcu.ie](http://www.dcu.ie)) is a research-intensive, globally-engaged, dynamic institution that is distinguished by both the quality and impact of its graduates and its focus on the translation of knowledge into societal and economic benefit. DCU prepares its students well for success in life, and in the workplace, by providing a high-quality, rounded education appropriate to the challenges and opportunities of the 21st century. As Ireland's University of Enterprise, it is characterised by a focus on innovation and entrepreneurship and a track-record of effective engagement with the enterprise sector, including commercial, social and cultural enterprises. Excellence in its education and research activities has led to its consistent position in the rankings of the world's top young universities.

DCU has a strong track record in attracting both Irish and European Union research funding under Horizon 2020 (and all previous Framework Programmes), Marie Curie Actions and Erasmus. We offer a dynamic and internationally-focused environment in which to advance your academic career.

Dublin City University is growing and 2016 saw a significant transformation for the University. The DCU Incorporation Programme saw the coming together of St. Patrick's College, Drumcondra, Mater Dei Institute of Education and Church of Ireland College of Education with Dublin City University. It brought together all the Humanities and Social Science disciplines at DCU, St Patrick's College and Mater Dei Institute in an enlarged Faculty of Humanities and Social Sciences with almost 200 staff.

**Duties attaching to the posts will include:**

The School of Physical Sciences wishes to recruit a new permanent appointee at Senior Lecturer level with expertise in Surface and Interface Science and Characterisation of Advanced Materials/Nanomaterials.

**1) Teaching:** The appointee will be expected to contribute directly to undergraduate and postgraduate physics and associated degree programmes, *via* teaching of physics lecture modules (including at advanced undergraduate and postgraduate level), coordination of undergraduate physics laboratories, contribution to development of undergraduate physics laboratory activities, student mentoring/tutoring, final year project supervision, as well as associated outreach and related activities.

The appointee would also be expected to provide ongoing leadership in teaching, especially in the area of surface science, semiconductor and materials physics, in particular in terms of undergraduate and taught postgraduate programme design and development. The appointee would also be expected to undertake various administrative duties related to the School's programmes, including acting as programme chair on the normal rotating basis. The total teaching hours and responsibilities will be defined by the Head of School in line with normal workload allocation.

**(2) Research:** The School of Physical Sciences has strong existing expertise in the areas of surface and interface science and advanced semiconductor and related materials, and this strength is further underpinned by a recent SFI Infrastructure award for an integrated surface and interface characterization facility (centred around interconnected x-ray photoelectron spectroscopy and atomic layer deposition facilities). This will be located in the DCU Nano Research Facility (NRF) which will allow basic surface and interface characterization science to be undertaken in conditions relevant to industrial processes. Strong internal collaborations with other colleagues in the School of Physical Sciences in the area of plasma and material physics exist, as do collaborations with the SFI AMBER centre in Trinity College Dublin, IMEC in Belgium, as well as with major multinational semiconductor device companies.

We require the appointee to have a strong background in Surface and Interface Science and Characterisation of Advanced Materials/Nanomaterials and we expect this person to be able to initially synergistically contribute to, and strengthen, some of the existing activities in surface and interface science and advanced semiconductor and related materials, utilizing the broad range of experimental facilities available. We require the appointee to lead an active and vibrant research programme in this area, including attracting significant research funding and recruiting and supervising postgraduate research students.

We are however seeking a candidate with a genuinely broad vision who, in the medium and longer term, will develop new research directions in novel materials and nanomaterials, and/or surface and interface characterization methods beyond the existing state of the art. We would be especially interested in candidates whose research vision includes alignment with key industrial needs and someone who will provide leadership in the School and University in the area of advanced materials and thereby further strengthen and develop the internal and external collaborations in the area of plasma and material physics mentioned above.

**Job Requirements:**

Applicants must hold an honours degree in Physics or a very closely related discipline and a PhD in Physics or a related area, with a strong preference for a candidate with a PhD in Surface and Interface Science and Characterisation of Advanced Materials/Nanomaterials. Postdoctoral experience, and a demonstrable track record of high quality research showing evidence of both originality in research and ability to attract funding appropriate to career stage are expected for an appointment at Senior Lecturer level. Experience in the delivery of undergraduate lecture and laboratory physics modules is also normally expected for appointment at Senior Lecturer level.

The successful candidate will be expected to take a leadership role in both the teaching mission of the School and in the research mission of the School and University in the area of Surface and Interface Science and Characterisation of Advanced Materials/Nanomaterials. To this end they should be able to teach a broad range of physics topics at honours undergraduate physics level and at postgraduate level in their area of specialization and contribute to the future development of the School's teaching. They will have a demonstrable and verifiable track record of high quality research in Surface and Interface Science and Characterisation of Advanced Materials/Nanomaterials as evidenced by regular publication in high impact journals, a significant citation rate, presentations at cognate conferences etc., or other measures of research quality and impact.

The successful candidate will be a highly motivated individual on track to develop into a top tier physics academic, with a well-balanced teaching and research profile.

**Informal enquiries:**

Professor Enda McGlynn, Head of School of Physical Sciences, DCU, Dublin 9. E-mail: [enda.mcglynn@dcu.ie](mailto:enda.mcglynn@dcu.ie) Tel: +353 (0)1 700 5387 Fax: +353 (0)1 700 5384.

**Closing date:** 13<sup>th</sup> December 2017

**Salary scale:** Senior Lecturer €69,963-€91,266 per annum

**Application Procedure:**

Application forms are available from the DCU Current Vacancies (Open Competitions) website at <http://www4.dcu.ie/hr/vacancies/current.shtml> and also from the Human Resources Department, Dublin City University, Dublin 9. Tel: +353 (0)1 700 5149; Fax: +353 (0)1 700 5500 Email: [hr.applications@dcu.ie](mailto:hr.applications@dcu.ie)

**Please clearly state the role that you are applying for in your application and email subject line: Job Ref #708 Associate Professor in Surface and Interface Science and Characterisation of Advanced Materials/Nanomaterials**

*Dublin City University is an equal opportunities employer*



**Assistant Professor in Surface Science and Semiconductor Materials Characterisation**  
**Faculty of Science & Health**  
**SCHOOL OF PHYSICAL SCIENCES**  
**(Four Year Fixed Term Position)**

**Introduction**

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**Duties attaching to the posts will include:**

The School of Physical Sciences wishes to recruit a temporary full-time (4 year) Lecturer with expertise in Surface Science and Semiconductor Materials Characterisation.

**1) Teaching:** The appointee will be expected to contribute directly to undergraduate and postgraduate physics and associated degree programmes, *via* teaching of physics lecture modules including 4<sup>th</sup> year undergraduate and postgraduate level, surface science, semiconductor and materials physics-related modules, coordination of undergraduate physics laboratories, contribution to development of undergraduate physics laboratory activities (with specific attention to the area of surface science, semiconductor and materials physics), student mentoring/tutoring, final year project supervision, as well as some associated outreach and administration. The total teaching hours and responsibilities will be defined by the Head of School in line with normal workload allocation.

**(2) Research:** The School of Physical Sciences has strong existing expertise in the areas of surface science and semiconductor materials characterization and this strength is now underpinned by a recent SFI Infrastructure award for an integrated surface and interface characterization facility (centred around interconnected x-ray photoelectron spectroscopy and atomic layer deposition facilities). This will be located in the DCU Nano Research Facility (NRF) which will allow basic surface and interface characterization science to be undertaken in conditions relevant to an increasingly wide range of industrial processes. Strong internal collaborations with other colleagues in the School of Physical Sciences in the area of plasma and material physics exist, as do collaborations with the SFI AMBER centre in Trinity College Dublin,

IMEC in Belgium, as well as with major multinational semiconductor device companies. This area of research is thus at an exciting stage of development within DCU, with major new infrastructure available for an ambitious new staff member to utilise, in addition to existing facilities.

We require the appointee to have a background in surface science and semiconductor materials characterisation and specifically either x-ray photoelectron spectroscopy or atomic layer deposition (or both) and to be able to contribute to existing project commitments as well as to developing new research directions in the general areas of surface science and characterisation, surface treatment/modification and materials physics. We require the appointee to lead an active research programme in this area, including applying for research funding and recruiting and supervising postgraduate research students.

**Job Requirements:**

Applicants must hold an honours degree in Physics or a very closely related discipline and a PhD in Physics or a related area, with a strong preference for a candidate with a PhD in Surface Science and Semiconductor Materials Characterisation. Applications from candidates with post-doctoral experience, who have a demonstrable track record of high quality research showing evidence of both originality in the course of their research and the ability to attract funding appropriate to career stage would be particularly welcome. Some experience in the delivery of undergraduate lecture and laboratory physics modules is highly desirable.

The successful candidate will be expected to contribute strongly to the teaching in the School and to contribute to the research mission of the School in the area of Surface Science and Semiconductor Materials Characterisation. To this end they should be able to teach a broad range of physics topics at honours undergraduate physics level and at postgraduate level in their area of specialisation. They will have a demonstrable and verifiable track record of high quality research in Surface Science and Semiconductor Materials Characterisation as evidenced by regular publication in high impact journals, a significant citation rate, presentations at cognate conferences etc., or other measures of research quality and impact.

The successful candidate will be a highly motivated individual with the potential to develop into a top tier physics academic with a well-balanced teaching and research profile.

**Informal enquiries:**

Professor Enda McGlynn, Head of School of Physical Sciences, DCU, Dublin 9. E-mail: [enda.mcglynn@dcu.ie](mailto:enda.mcglynn@dcu.ie) Tel: +353 (0)1 700 5387 Fax: +353 (0)1 700 5384.

**Closing date:** 13<sup>th</sup> December 2017

**Salary scale:**

Lecturer/Assistant Professor €38,352 – €52,724 (below bar)

€51,159 – €79,147 (above bar)

**Application Procedure:**

Application forms are available from the DCU Current Vacancies (Open Competitions) website at <http://www4.dcu.ie/hr/vacancies/current.shtml> and also from the Human Resources Department, Dublin City University, Dublin 9. Tel: +353 (0)1 700 5149; Fax: +353 (0)1 700 5500 Email: [hr.applications@dcu.ie](mailto:hr.applications@dcu.ie)

**Please clearly state the role that you are applying for in your application and email subject line: Job Ref #709 Assistant Professor in Surface Science and Semiconductor Materials Characterisation**

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