



UNIVERSITY OF
BIRMINGHAM

HUMAN
RESOURCES

Advert

Post Name and Position Number: [Research Fellow in High-Resolution SPM Imaging of Organic Semiconductors](#)

Dept/School/Institute Name, College Name: School of Chemistry

Location: University of Birmingham, Edgbaston, Birmingham UK

Full time starting salary is normally in the range £34,980 to £44,263 with potential progression once in post to £46,974

Grade 7

Full Time

Fixed Term Contract up to June 2026

Closing Date: 19th February 2024

UOB general information

People are at the heart of what we are and do. We want to attract outstanding, inspirational, and talented people, support them to succeed, and celebrate their success. Working at the University of Birmingham gives you access to the best financial and physical resources, a beautiful campus and an intellectually stimulating and diverse community. Our sector leading development programmes have made this a place where staff can thrive and recognition by Athena Swan, Stonewall, and Two Ticks demonstrates our commitment to supporting talented people from all backgrounds.

Advert text

The School of Chemistry at the University of Birmingham is a vibrant and thriving academic community, with over 100 academic and research staff, 20 professional services staff and over 600 students. With a strong focus on our four Research Themes of Energy, Sustainability, Environment and Health, and a number of interdisciplinary Interest Groups, the School has ambitious plans to grow research activity and are in an exciting period of growth: major investment from the University have delivered a state-of-the-art research building (opening in 2024), and new multi-million-pound high-performance computing facilities, which will ensure UK-leading compute capability.

We are looking for a Postdoctoral Research Fellow to work in the area of experimental nanoscience at surfaces. The post holder will join the Group led by Prof. Giovanni Costantini in the School of Chemistry at the University of Birmingham. For over 20 years, the [CostantiniLab](#) has been exploring the fundamental interactions and properties of functional molecular units on solid surfaces as well as developing novel cutting-edge methods for characterising these systems at the molecular and atomic scale.

The project will be based on the innovative methodology – [electrospray deposition combined with scanning tunnelling microscopy, ESD-STM](#) – recently developed by the Costantini Group (see for example [Sci. Adv., 2018](#); [Adv. Mater., 2020](#); [JACS, 2021](#); [ACS Nano, 2022](#); [Adv. Funct. Mater., 2023](#)). The aim of the project is to apply the high precision and rigour of surface science – in particular the ultimate spatial resolution of scanning probe microscopy (SPM) – to solve analytical problems that

are intractable with any other current characterisation technique. A specific emphasis will be on studying functional organic semiconductors used in organic electronics, photovoltaics, sensing and thermoelectric applications. As such, this project holds the potential to yield groundbreaking outcomes of high fundamental and applied impact.

The postholder will be responsible for all aspects of the project which will include sample preparation by ESD, scanning probe microscopy (SPM) measurements and analysis and interpretation of the SPM data. Training will be provided in some of the component techniques but demonstrable experience in a number of aspects pertinent to the research project is required.

Given the multidisciplinary nature of the project and the extensive network of collaborations by the Costantini Group with world-leading synthetic, device and theoretical groups across the globe (e.g. at the University of Cambridge, University of Oxford, Imperial College London, Stanford University, Peking University, University of Illinois Urbana-Champaign, Georgia Tech, etc.), this role offers an outstanding opportunity to deepen one's knowledge of organic semiconductors and their application in materials and devices, as well as to work in close cooperation with the main players in the field.

The closing date for applications is 19th February 2024 - please note that we reserve the right to close this vacancy early once a sufficient number of applications have been received.]

For further information please contact Prof Giovanni Costantini, g.costantini@bham.ac.uk

We value diversity at The University of Birmingham and welcome applications from all sections of the community

The University of Birmingham is an equal opportunity and family-friendly employer, and the School of Chemistry welcomes flexible working to suit family or other commitments. The University has on-campus childcare facilities. The School of Chemistry holds an Athena SWAN Bronze Award in recognition of its work in promoting women's careers in STEM subjects in higher education.

What we can offer you

Working at the University of Birmingham brings many benefits, from generous holiday leave, to reward and recognition. The University offers a range of benefits to help you achieve a better balance between your family and work responsibilities. We provide discounts on childcare, have two day nurseries and a holiday club on or near campus. You can benefit from a number of retail offers and discounts and will have the opportunity to join private medical and dental schemes such as the National Dental Plan. For more information about staff benefits, please visit: <http://www.birmingham.ac.uk/staff/employeebenefits/index.aspx>

The University of Birmingham is in the midst of one of the most transformational campus redevelopments since the first phase of building on our Edgbaston campus was completed in 1909. The development projects, part of a ten-year campus investment plan, are creating outstanding new facilities for our students, staff and the local community. The first phase of the capital masterplan included a state-of-the-art library, world class sport and fitness centre, the new School of Engineering and the transformational Collaborative Teaching Laboratory. The second phase will include the Molecular Sciences Building due to open in 2023 providing the very best in educational facilities for the School of Chemistry. You will also find bars, shops, a hair salon, opticians, a concert hall, fine art gallery and geology museum on campus.



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In addition, you will have access to all of the University's facilities including state-of-the-art research facilities, outstanding nurseries, faith support, wellbeing services, staff clubs and networks.

With more miles of canal than Venice and more trees than Paris, the UK's cosmopolitan Second City can rival any European capital. Nestling in the big heart of England, Birmingham's prime central location is what sets it apart. Less than two hours from London, and with an international airport on its doorstep, it is home to the largest financial services and creative sectors outside the capital and has fantastic connections to the rest of the country and beyond.

The University has an active programme of works to improve accessibility across campus.

Applicants are invited to apply on-line via our e-recruitment system. This can be found [here](#).

Contact your Recruitment Team by telephone on 0121 415 9000 or through the [HR Service Portal](#). You will be able to speak to your dedicated Recruitment Adviser about all of your specific recruitment needs.

