

Government to look at ways new high-tech materials could advance UK industry

- Call for evidence launched to help inform the government's approach to advanced materials
- advanced materials are critical for future economic and tech growth and include self-healing, 'living' materials and 2D materials made from a single layer of atoms
- government will also establish an Advanced Materials Scoping Group, made up of industry and academic leaders to provide independent, expert advice

The government has today (10 February) launched a [call for evidence](#) to gather insight and shape the UK's approach to advanced materials – high performance engineered materials that will be critical to the future success of many industries.

As set out in our [Innovation Strategy](#), advanced materials are artificially manipulated, often at the atomic level, to give them enhanced abilities and vastly improved performance, such as increased strength, electrical and thermal properties, compared to conventional materials.

Industry Minister Lee Rowley said:

Advanced materials can survive the harshest conditions, enable enhanced durability and manufacturing opportunities, and even 'heal' themselves.

That is why we have launched a call for evidence – to gather insight and inform our approach to these extraordinary materials that could have a transformative impact on our daily lives and economic opportunities.

Examples of advanced materials include:

- metamaterials: artificially structured composite materials with unique electromagnetic properties that could transform the communications industry by enabling compact, lightweight 5G antennas that are easier to manufacture, ship and install
- 2D materials: formed with only a single layer of atoms, which can contribute to more efficient batteries for electric vehicles, strengthen traditional materials, and have novel electrical and superconducting applications
- self-healing and 'living' materials: systems that change shape or structure over time, including self-repairing in response to

- degradation, such as self-healing roads that fix their own potholes
- composite structures: stronger, more lightweight, and more durable structures, that can be used as coating technologies that enhance materials such as corrosion resistance

An Advanced Materials Scoping Group will be formed to support the government's work in this area and assess responses to the call for evidence. Members of the group will be recruited from across industry and academia.

The UK already has a world-leading advanced materials science base. The 2010 Nobel prize was awarded to scientists at the University of Manchester for advances in graphene, an ultra-thin, ultra-strong material.

The government has identified advanced materials and their manufacturing as one of the 7 'technology families' of the [Innovation Strategy](#) – the government's plan to ensure the UK's world-leading science and R&D sector help create a robust and agile economy that works for the whole of the UK.

These 7 'technology families' are transformational technologies that will drive change over the coming decades and where the UK has globally competitive research and development (R&D) and industrial strength. Along with advanced materials, others include AI, digital and advanced computing as well as robots and smart machines.

[Applications invited for appointment to the Northern Ireland Human Rights Commission](#)

News story

The Secretary of State for Northern Ireland is seeking to appoint a new Commissioner to the Northern Ireland Human Rights Commission



The Northern Ireland Human Rights Commission is as an executive non-departmental public body sponsored by the Northern Ireland Office. The Commission operates independently from the government and is responsible for protecting and promoting the human rights of everyone in Northern Ireland.

Personal Specification

An outstanding individual is sought to become a member of the Commission. The successful applicant will be someone who has a commitment to human rights. They should have an understanding of and commitment to working in partnership with a wide range of stakeholders and be able to apply personal expertise in contributing to the work of the Commission. They should also be committed to the need for good governance in public bodies.

Terms of appointment

The position of Commissioner is for a term of three years. The position attracts an annual remuneration of £7,500 with an expected time commitment of three days per month.

How to apply

Those interested in applying for the post should download the application pack from the [Cabinet Office's public appointments website](#)

Completed applications should be sent by email to: nihrc2022@nio.gov.uk by the closing date of 6 March 2022.

Equality of Opportunity

Appointments will be made on merit and with regard to the equality provisions set out in Section 75 of the Northern Ireland Act 1998. We encourage applications from all sections of the community.

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[Animal medicine seizure notice: Parcel addressed to premises in Newry, County Down](#)

News story

Details of seizure notice served following a parcel addressed to premise in

Newry, County Down which was stopped at a Belfast depot.



The following veterinary medicines were identified at a courier company based at a Belfast depot. The products were then detained and subsequently seized by Department of Agriculture, Environment and Rural Affairs (DAERA). This parcel was addressed to a residential premise in County Down and was shipped from Australia, the parcel contained:

- 3 x A.M.P.5 Injection (20ml)

This product is an injectable product intended for use in horses and dogs and is not an authorised veterinary medicine in GB or NI.

The medicines were seized under Regulation 25 (Importation of unauthorised veterinary medicinal products) of the Veterinary Medicines Regulations 2013.

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[Solent plastic pollution hub launched for Hampshire litter pickers](#)

The Environment Agency and independent coastal partnership, the Solent Forum, have launched an [information hub](#) for litter pickers.

The web-based resource features guidance for new and existing groups, including group links, information on borrowing equipment, litter recycling and disposal, and local initiatives. Litter pickers can also join a [Facebook](#) page featuring news and local events.

The 2-year initiative is part of a wider project funded by the cross-Channel [Interreg Preventing Plastic Pollution project](#), which is made up of 18 expert organisations aiming to reduce the impact of plastic pollution in river and marine environments across southern England.

Environment Agency project lead Lizzie Lewis said:

Each year an estimated 14 million pieces of plastic rubbish end up in and around our waterways, with around 500,000 pieces flowing out into our oceans, adversely affecting marine life and habitats.

We know there's lots of excellent work taking place across the Hampshire patch to improve river and coastal health. This new online resource will collate and publicise this activity.

By gathering and recording river catchment data, Interreg partners can create catchment-wide risk maps which identify plastic pollution hotspots. The results will help us to focus our prevention efforts, and hopefully encourage people to change their behaviours by following our waste hierarchy – avoid, reduce, reuse and recycle – to help our planet thrive.

The online resources are being hosted by the Solent Forum.

Kate Ansell, Solent Forum project lead, said:

We are delighted to be part of this project which helps to fulfil our ambitions to reduce litter and plastics for the benefit of all Solent coastal communities. The promotion and sharing of information and data Solent-wide will help to support local community groups and build links between them.

This work also supports our Cleaner Solent Shores and Seas Initiative which co-ordinates information on a wide range of water quality issues throughout the Solent and its catchments.

For more information about the project email solentforum@hants.gov.uk.

Environment Agency: As a regulator the Environment Agency prevents waste plastic entering the environment by cracking down on waste crime and poor waste management.

As an influencer its ambition is to promote better environmental practices that result in a reduction of plastic waste, helping to achieve the goals and commitments outlined in its 5 year plan to create better places for people, wildlife and the environment, and the government's 25 year Environment Plan.

Interreg Preventing Plastic Pollution (PPP): The partnership seeks to understand and reduce the impacts of plastic pollution in the river and marine environments. By looking at the catchment from source to sea, the project identifies and targets hotspots for plastic, embeds behaviour change in local communities and businesses, and implements effective solutions and alternatives.

PPP is a €14million funded EU INTERREG VA France (Channel) England Programme project co-financed by the European Regional Development Fund which works mainly across Brest Harbour, Bay of Douarnenez, Bay of Veys, Poole Harbour,

Medway, Test and Itchen, East Hampshire, Tamar, and Great Ouse catchments.

Partners are the Environment Agency, Department for Environment, Food and Rural Affairs, Queen Mary University of London, LABOCEA Conseil, Expertise et Analyses, Syndicat mixte établissement public de gestion et d'aménagement de la baie de Douarnenez, Office Français De La Biodiversité, Parc naturel marin d'Iroise, Brest Métropole, Centre national de la recherche scientifique, Conseil départemental de la Manche, Institut français de recherche pour l'exploitation de la mer, The Rivers Trust, Syndicat de bassin de l'Elorn, ACTIMAR, Brest'aim, Westcountry Rivers Trust, South East Rivers Trust, and Plymouth City Council.

Solent Forum: The Solent Forum is an independent coastal partnership established in 1992 to develop a greater understanding among the many local and harbour authorities, user groups, marine businesses and agencies involved in planning and management of the Solent. It assists and advises them in carrying out their functions. The Environment Agency is a forum member.

[Solent Forum – Solent Plastics Pollution Hub](#) [Solent Plastics Pollution Hub | Facebook](#)

[Apprentices among those shortlisted in £600,000 climate satellite design competition](#)

The Nanosat Design Competition opened for entries in November 2021, with aspiring space scientists invited to design a small satellite for launch from the UK to help inform solutions to climate change.

More than 40 teams from across the UK and aged between 16 and 37 submitted detailed applications. Many had little or no previous experience of designing small satellites before entering the competition, which aims to encourage more young people to consider a career in the UK's thriving space sector.

Five teams have now been selected to progress to the next phase of the competition, which includes a four-month mentoring programme with space industry experts, ahead of final judging in May.

The teams hail from Huddersfield, Glasgow, Kent, Buckinghamshire and Southampton, with their designs ranging from satellites to improve placement of offshore wind turbines to those that can analyse the British shoreline and its coastal vegetation.

On offer is a share of £600,000 to turn these designs into a functioning satellite which could be launched from a UK spaceport as soon as next year.

Transport Minister Trudy Harrison said:

With satellite launches due to start from British soil this year, it's great to see our young people coming up with brilliant and innovative uses for nanosats in our important battle against climate change.

From wind turbines to coastal vegetation, the shortlisted ideas display a wealth of ingenuity and original thinking which I commend.

As we stand on the cusp of a new commercial space age, this type of technology will help create new, high-skilled jobs and bring economic benefits to communities right across the UK, helping us to level up and inspire the next generation of space experts.

This week is National Apprenticeship Week (NAW) 2022, celebrating the positive impact apprenticeships bring to employers, individuals, and the economy. [Hundreds of events](#) will take place throughout National Apprenticeship Week, giving potential learners and employers the chance to find out more about the brilliant benefits apprenticeships offer.

Ian Annett, Deputy CEO of the UK Space Agency, said:

These five teams stood out in a competitive field and should be incredibly proud of making it through to the next round of the competition with their climate satellite designs.

From this year, we'll have the ability to launch small satellites from the UK which opens up huge opportunities to inspire the next generation, create hundreds of new jobs and support research in important areas such as climate science.

Details of the shortlisted teams:

[Team NORI](#) : A team of apprentices at Reliance Precision Engineering, in Huddersfield, are designing a satellite to identify the species and volume of biomass growing in the intertidal region of the UK coastline. This could help calculate the amount of carbon dioxide that can be absorbed and stored in biomass.

Team Nori from left to right Maria Perrins, Courtney Livsey, Daniel Haigh, Charles Mukoyi, Tom Worsley, Daniel Lewis, Rory White and Sam Spurr. Credit: UK Space Agency

GU Orbit – OirthirSAT Team: Students from Glasgow University have proposed a satellite to analyse shorelines and coastal vegetation. This will help

scientists and policymakers understand the impact of climate change on coastal regions.

Team Cetas: A team from Sir William Borlase's Grammar School, in Marlow, Buckinghamshire, want to use a satellite to image Harmful Algal Blooms that produce large quantities of methane and damage marine life. This could improve our understanding of how the blooms form and their link to methane production.

Team DECSTAR: Students from the University of Kent are designing a satellite to tackle two separate challenges using a GNSS reflectometer. The data collected could help inform the optimal positioning of offshore wind turbines and help to monitor the build of plastic pollution.

Team DECSTAR University of Kent. Macy Jones, Luke Cornwell, Luke Oxlade, Alice Brown

Southampton Spaceflight: Students from the University of Southampton are hoping to improve calculations of root-zone soil moisture, which is a key indicator of climate change. Their satellite design will use radar signals to collect data and has a built-in drag sail to help the satellite safely de-orbit once its mission is over.

Team Southampton Spaceflight University of Southampton. Robert Pope, Hazel Mitchell, Ceris Brown, Harvey Ryder, Ethan Tregidga

As set out in the National Space Strategy, the UK is set to become the first country in Europe to host small satellite launches in 2022, building on the UK's leading small satellite industry and creating high skilled jobs across the country. This will also help UK scientists use space technology to help tackle global challenges, including climate change.

Visit nanosatlaunch.uk to find out more about the competition.

The UK Space Agency SatelLife competition is also currently open for entries for those aged between 11 and 22 years old, [find out more here](#).