

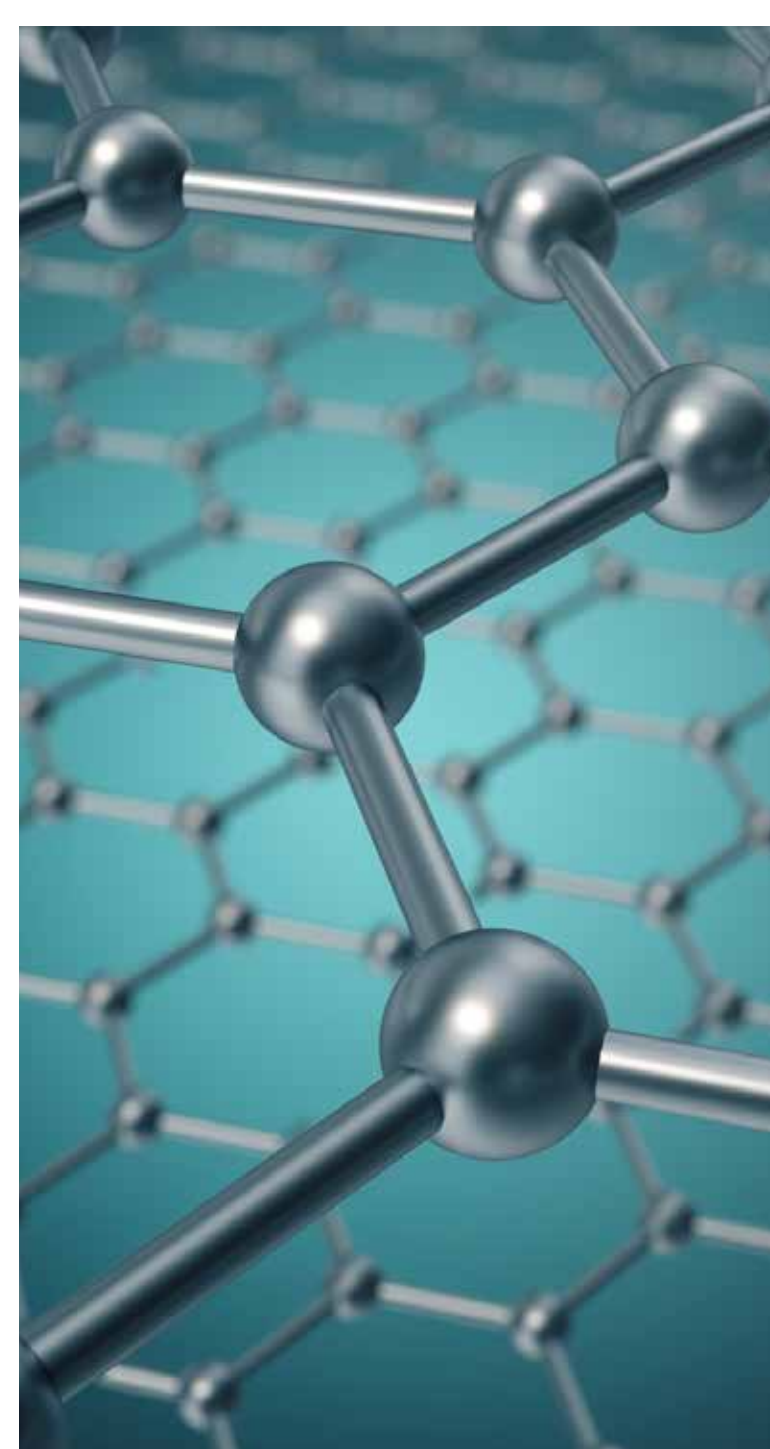
Standardisation - Projects (Call 2016)

An overview of the funded projects from the Targeted Programme Pre- and Co- Normative research

Standards for industrial production of graphene (16NRM01)

New methods to be developed for electrical characterisation of graphene

Producing large areas of graphene with uniform electrical properties is a major challenge in making this unique material commercially viable for the electronics industry. This project will address a key aspect of this challenge by investigating methodologies for the electrical characterisation of graphene, producing Good Practice Guides and informing standards. This will underpin production of validated commercial specifications of graphene at an industrial scale.



Measuring road reflection to improve street lights (16NRM02)

Better tools to calculate light reflection will create safer roads

Road lighting must provide sufficient light for road safety, but international standards prescribe reference tables based on 40 year old measurements to calculate light levels. This project will provide updated measurement guidance and reference materials based on current road materials and a variety of road surface conditions, to solve these problems. Resulting standards will improve performance of road lighting and lead to safer night-time driving.



New correction factors for radiotherapy calibration (16NRM03)

New cancer treatments need new calibration calculations to ensure accuracy

Ionizing radiation beams for cancer treatment must be calibrated accurately, an important aspect of which is correcting for beam quality differences between calibration laboratories and hospitals. This project will update current correction values using measurements and models of the latest ionizing radiation technologies, ensuring SI traceability. These will be incorporated into a revised standard, ensuring beams which treat 1.7 million citizens annually are accurately calibrated.



Building trust in magnetic nanoparticles (16NRM04)

New measurement approaches will characterise magnetic nanoparticles and spur innovation

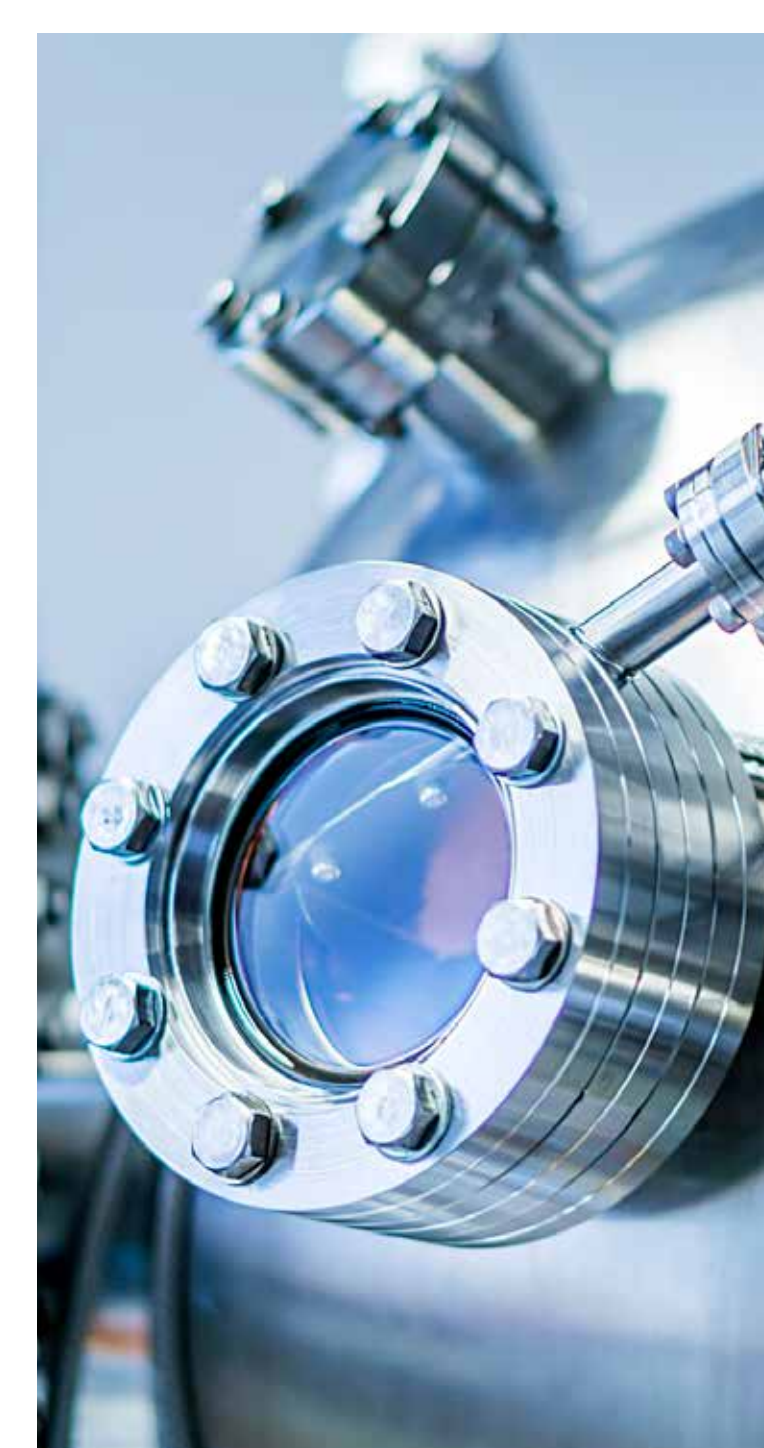
Magnetic nanoparticles (MNPs), which can be precisely manoeuvred by magnetic fields, could have many valuable applications including targeting cancer cells. This project will support MNP innovation by investigating new measurement approaches, which will feed into the first international standard for measuring MNP magnetic properties. The MNP industry will then be able to market new innovations, with confidence in their properties.



Creating standardised ionisation gauges (16NRM05)

More reliable vacuum measurements for materials researchers and electronics manufacturers

Vacuums used in materials research and microelectronics use ionisation gauges to measure vacuum pressure, but there are significant differences between gauge types and all lack long-term stability. This project will specify an improved, standardised gauge, which can be reproduced by manufacturers, used as a reference standard, and support new industry standards, thereby improving accuracy to the vacuum market and the industries it supports.



Standardisation - Projects (Call 2016)

An overview of the funded projects from the Targeted Programme Pre- and Co- Normative research

Reliable measurements of reflective insulation (16NRM06)

Traceable emissivity measurements will help develop higher performance insulation materials

Reflective insulation manufacturers must declare surface emissivity, so customers can calculate energy savings. However, different emissivity measurement techniques have large discrepancies. This project will test these techniques, create reference standards, develop best practices to bring traceability to emissivity measurement instruments, and amend current standards. Developers of thermal insulation materials will then be able to perform reliable emissivity measurements and hence develop higher performance products.



Faster phone safety testing (16NRM07)

Validating quicker methods for measuring energy absorption from mobile phones

Energy from mobile phone electromagnetic fields absorbed by users, the specific absorption rate (SAR), must not exceed safe limits. A recently developed vector-based SAR measurement approach is better suited to current mobile devices than previous methods. This project will validate its performance, develop traceable calibration methods and create a new standard that will allow its use, thereby dramatically reducing testing time for mobile device manufacturers.



New standards for measuring visual effects (16NRM08)

Helping industry control colour, texture, gloss and sparkle

Many products depend upon visual effects - colour, gloss, transparency, texture. Commercial devices have recently been developed for measuring these effects using a technique called Bidirectional Reflectance Distribution Function (BRDF). This project will validate BRDF measurements and propose standards and guidance. Standardised approaches will support development of improved commercial BRDF instruments, giving industries such as automotive and cosmetics better control of product appearance.



EMPIR - joint research projects for Europe