
UK Nanotechnology Health, Safety and Environment Directory 2009

Knowledge
Transfer
Network

Nanotechnology

Prepared by the Nanotechnology Knowledge Transfer Network
(A funded network under the Technology Strategy Board)

Final Version 1.5 (October 2009)

Preface

The UK Nanotechnology Knowledge transfer network has compiled a convenient and easy to use compendium of UK Nanotechnology Health, Safety and Environment centers of excellence in the UK. The purpose of putting this directory together is to assist both researchers and industry in finding the most appropriate advice for work undertaken in the field be it toxicity testing through to advice on regulation and standards. This mini-Directory has collated data from publically available sources including the 'Directory' website (<http://www.thedirectory.eu.com/>), organisational websites and organisations known to the Nanotechnology KTN. The range of organisations in this document includes, UK Government (and agencies), research institutes and networks that have a declared public interest in this area. We hope you find this document useful in many fields of endeavors.

Listing on this directory is not an endorsement of capability but is based on the best available knowledge at the time of publication. No responsibility is taken for omissions nor the permanence of staff which are the current points of contact. For further information on the compilation of the UK Health, Safety and Environment Directory please contact Dr James Johnstone (james.johnstone@nanoktn.com) at the Nanotechnology KTN.

Number	Organisation	Organisational type	Web Site	Region
1	AEA	Company	http://www.aeat.co.uk	South East
2	AssuredNano	Company	http://www.assurednano.com/	North East
3	BSI Committee for Nanotechnologies (NTI/1)	Company	http://www.bsigroup.com/nano	London
4	Cardiff University (BRASS)	Academia	http://www.brass.cf.ac.uk/	Wales
5	Cefas	Research Institute	http://www.cefas.co.uk	South West
6	Crown Bio Technology Ltd	Company	http://www.crownbio.co.uk	London
7	DEFRA	Government	http://www.defra.gov.uk/environment/quality/nanotech/index.htm	London
8	Edinburgh University - ELEGI Initiative	Academia	http://www.cir.med.ed.ac.uk/content.asp?sID=46&pID=34	Scotland
9	Enviresearch Ltd	Consultant	http://www.enviresearch.com	North East
10	European Process Safety Centre	Company	http://www.epsc.org	West Midlands
11	FERA (Food and Environment Research Agency)	Government	http://www.fera.defra.gov.uk	Yorkshire
12	FSA - Food Standards Agency	Government	http://www.food.gov.uk/gmfoods/novel/nano	London
13	Health & Safety Laboratory	Government	http://www.hsl.gov.uk/centres/nano/	West Midlands
14	Health and Safety Executive	Government	http://www.hse.gov.uk	North West
15	Health Protection Agency	Government	http://www.hpa.org.uk	South East
16	IEG Technologies UK Ltd	Company	http://www.iegtechnologies.co.uk	South East
17	Institute of Nanotechnology	Network	http://www.nano.org.uk	Scotland

18	Institute of Occupational Medicine	Research Institute	http://www.iom-world.org	Scotland
19	IRIS Engineering & Technology Ltd	Company	http://www.iriset.co.uk	North East
20	Nanotechnology Industries Association	Network	http://www.nanotechia.org/	Overseas
21	NanoWatch	Network	http://www.leatherheadfood.com/nanotechnology	South East
22	Napier University	Academia	http://www.napier.ac.uk/nano	Scotland
23	National Physical Laboratory (Environmental Monitoring)	Research Institute	http://www.npl.co.uk/environmental-measurement/	South East
24	Natural History Museum	Research Institute	http://www.nhm.ac.uk/research-curation/research/index.html	London
25	NERC - Environmental Nanoscience Initiative	Government	http://www.nerc.ac.uk/research/programmes/nanoscience/	South West
26	Responsible Nano Forum	Consultant	http://www.responsiblenanoforum.org	London
27	Safenano	MNT Facility	http://www.safenano.org	Scotland
28	SETAC-UK	Network	http://www.setac-uk.org.uk/	South West
29	SnIRC	Network	http://www.snirc.org/	Scotland
30	University of Aberdeen	Academia	http://www.abdn.ac.uk/deom	Scotland
31	University of Birmingham (FENAC)	Academia	http://www.gees.bham.ac.uk/research/fenac/	East Midlands
32	University of Sussex (SPRU)	Academia	http://www.sussex.ac.uk/spru/irafols	South East

2009 UK Nano Health, Safety and Environment Directory

**Organisation:** AEA

Address: Gemini Building
Fermi Avenue
Harwell IBC
Didcot
Oxfordshire
OX11 0QJ

Region: South East

Website: <http://www.aeat.co.uk>

Telephone: Direct 0870 190 6548

Contact Email: enquiry@aeat.co.uk

Supply Chain: R & D provider

Legal Status: Public Limited Company

Directory Listed

Point of Contact: Dr Clare Collier

Position: Delivery Manager

Department: Energy and climate change

Personal email: clare.collier@aeat.co.uk

Record Number: 1

Description: AEA is a leading energy and climate change consultancy. With operations in the UK, Europe and the US, we provide advisory services to the UK Government and work extensively with the EU and major private sector organisations around the world. We are internationally renowned in energy and climate change, air and water quality, resource efficiency and waste management, innovation and knowledge transfer, and sustainable transport. Our multi-disciplinary team of over 1,000 technical and scientific consultants, project management experts, information technology professionals, and legal and regulatory specialists enables us to deliver fully integrated and business-oriented environmental and IT solutions for our customers.

Activities:

Value Chain: Consultancy, Regulations & Standards

Activities:

Market Sectors: Energy, Environmental Remediation

Organisation: AssuredNano

Address: c/o The Centre for Process Innovation

Wilton Centre

Wilton

Redcar

Teesside

TS10 4RF

Region: North East

Website: <http://www.assurednano.com/>

Telephone: +44 (0) 1642 455 340

Contact Email: info@assurednano.com

Supply Chain: Business Support

Legal Status: Private Limited Company

Directory Listed

Point of Contact: Dr Keith Robson

Position: CEO

Department:

Personal email: keith.robson@assurednano.com

Record Number: 2

Description: AssuredNano™ was established in 2008 as the premier Safety, Health and Environment (SHE) accreditation scheme for organisations producing nanomaterials, nano-enabled products and users of nanotechnology in general. Companies and organisations which gain accreditation to the AssuredNano® standard can offer demonstrable proof of a commitment to good SHE practice to employees, customers and other stakeholders. AssuredNano® is comprehensive in its scope and application. Covering the full product life cycle, it is as relevant to a fundamental research group as it is to a manufacturing or recycling operation. Its modular approach, together with audit led compliance and a commitment to continuous improvement, ensures relevance to all organisations and continuing conformance. The commitment of AssuredNano® to continuous improvement applies to its own methodologies as well as to those of its clients. This commitment is of critical importance in such a fast moving environment as that presented by nanomaterials, nanotechnology and the emerging development of consumer nano-enabled applications.

Activities: AssuredNano® offers a comprehensive nanomaterials SHE Accreditation Scheme which is based on evolving good practice and is presented as a comprehensive and well documented manual. It seeks to cover all aspects of research and commercial activity covering at least the following areas: • Manufactured nanomaterial types & characteristics • Nanoparticle exposure & risk • Principles of risk assessment • Risk evaluation • Control of exposure • Measurement of exposure • Process considerations • Spillages & accidental releases • Disposal procedures • Packaging, labelling and transportation • Communications and training • Competency • Internal auditing • Record keeping Accreditation is usually on a business unit, plant or department basis depending on which is most applicable. Multiple businesses or departments within a single site or organisation will require individual accreditation.

Value Chain:

Activities:

Market Sectors:

Organisation: BSI Committee for Nanotechnologies (NTI/1)

Address: BSI Group
389 Chiswick High Road
London
W4 4AL

Region: London

Website: <http://www.bsigroup.com/nano>

Telephone: +44 (0) 20 8996 7430

Contact Email: anne.cassidy@bsigroup.com

Supply Chain: Business Support

Legal Status: Operates under Royal Charter

Directory Listed

Point of Contact: Ms Anne Cassidy

Position:

Department:

Personal email: anne.cassidy@bsigroup.com

Record Number: 3

Description: UK standardization in the emerging field of nanotechnologies is the responsibility of the BSI technical committee NTI/1. This technical committee (TC) was established in June 2004 and has the following Terms of Reference:
 > to mirror the work of ISO/TC 229 "Nanotechnologies", IEC/TC 113 "Nanotechnology standardization for electrical and electronic products and systems" and CEN/TC 352 "Nanotechnologies"
 > to formulate a UK strategy for standardization in nanotechnologies through a broad consultation with relevant stakeholders
 > to ensure the UK view is given due consideration within the European Union, CEN, ISO and IEC
 > to develop and support formal standards and other standardization documents in the area of nanotechnologies and to promote their use by industry and other stakeholders
 > to ensure due consideration of the need for standards and standardization is given by UK nanotechnology networks and organisations, and to coordinate activities and actions in this area.

Activities: The committee, chaired by Dr Peter Hatto, Director of Research for IonBond Ltd, currently has members from approximately 30 organisations, including trade and industry associations, professional institutions, academia, industry and government departments/agencies. Membership is planned to increase over time in order to have broad representation from all stakeholder groups. Liaisons are maintained with a wide range of interested organisations.

Further enquiries regarding the activities of NTI/1 should be addressed to the Secretary, Ms Anne Cassidy anne.cassidy@bsigroup.com, or the Chairman, Dr Peter Hatto peter.hatto@ionbond.com (Source: BSI Website)

Value Chain: Regulations & Standards, Training

Activities: Measurement, characterization, terminology, safety, environment

Market Sectors: Advanced Materials, Aerospace & Defence, Agriculture & Food, Analytical Equipment, Automotive, Catalysts & Absorbents, Coatings & Inks, Consumer Products, Cosmetics & Personal Care, Electronics & IT, Energy, Environmental Remediation, Medical Devices, Medical Diagnostics, Opto-electronics, Packaging, Pharmaceuticals, Process Plant, Security, Sensors, Textiles

Organisation: Cardiff University (BRASS)

Address: 55 Park Place
Cardiff University
Cardiff
South Glamorgan
CF10 3AT

Region: Wales

Website: <http://www.brass.cf.ac.uk/>

Telephone: +44 (0) 2920 876562

Contact Email: heminge@cf.ac.uk

Supply Chain: Business Support

Legal Status: Academia

Directory Listed

Point of Contact: Lori Frater

Position: Research Manager

Department:

Personal email: fraterlb@cf.ac.uk

Record Number: 4

Description: The Centre for Business Relationships, Accountability, Sustainability and Society (BRASS) is an ESRC funded research centre combining expertise from Cardiff University's Business School, School of City and Regional Planning, and Law School. Research at the centre focuses on business sustainability and corporate social responsibility, and particularly on the relationships between businesses and their key stakeholders (customers, suppliers, investors, workers, local communities and regulators).

BRASS pursues high quality, interdisciplinary social science research and engagement with research users to create knowledge and tools that will promote more sustainable stakeholder relationships amongst and within businesses, society and the environment.

Activities: BRASS carried out research into business sustainability and corporate social responsibility. With regard to the Nanotechnology industry BRASS carries out research into the regulation of the Nanotechnology for government agencies and corporate clients. This research can be accessed as a resource for companies in the nanotechnology industry.

Value Chain: Assembly

Activities:

Market Sectors: Advanced Materials, Aerospace & Defence, Agriculture & Food, Analytical Equipment, Automotive, Catalysts & Absorbents, Coatings & Inks, Consumer Products, Cosmetics & Personal Care, Electronics & IT, Energy, Environmental Remediation, Medical Devices, Medical Diagnostics, Opto-electronics, Packaging, Pharmaceuticals, Process Plant, Security, Sensors, Textiles

Organisation: Cefas**Address:** Barrack Road

The Nothe

Weymouth

Dorset

DT4 8UB

Region: South West**Website:** <http://www.cefas.co.uk>**Telephone:** +44 (0) 1305 206668**Contact Email:** matthew.sanders@cefas.co.uk**Supply Chain:** R & D provider**Legal Status:** Government Agency**Directory Listed** **Point of Contact:** Dr Matthew Sanders**Position:** Laboratory Manager**Department:****Personal email:** matthew.sanders@cefas.co.uk**Record Number:** 5**Description:** Cefas is an internationally renowned aquatic scientific research and consultancy centre. We aim to be the prime source of high quality science used to conserve and enhance the aquatic environment, promote sustainable management of its natural resources, and protect the public from aquatic contaminants.**Activities:** Cefas scientists are utilising the world class facilities available at the Weymouth laboratory to develop a tiered testing approach, which comprises an initial screen for cellular toxicity using cultured cells, followed by standardised (OECD) invertebrate ecotoxicology tests (e.g. *Daphnia magna*). Finally, environmentally relevant fish species (e.g. stickleback, *Gasterosteus aculeatus*) are being used to assess a range of toxicogenomics, histopathological and behavioural endpoints to address regulatory safety and compliance.**Value Chain:** Supplier of R&D and commercial services : (1) Primary Activities - testing & development of products, dossier preparation, efficacy or toxicity testing, (2) Support Activities, regulatory interpretation, impacts assessments.**Activities:** Risk assessment, Ecotoxicology, Regulatory support, Aquatic exposure**Market Sectors:** Environment

Organisation: Crown Bio Technology Ltd**Address:** Knowledge Dock Business Centre

University of East London

4 University Way

London

London

E16 2RD

Region: London**Website:** <http://www.crownbio.co.uk>**Telephone:** +44 (0) 208 223 7304**Contact Email:** info@crownbio.co.uk**Supply Chain:** Integrator**Legal Status:** Private Limited Company**Directory Listed** **Point of Contact:** Mr Edward Bell**Position:** Managing Director**Department:****Personal email:** ejbell@crownbio.co.uk**Record Number:** 6**Description:** Small R/D company developing bio sensor applications. Environmental, Agricultural (pesticides, biocides, fungicide diagnostics). Have developed world's first biosensor used in fast to cost detection of soil contaminants (PAH's, PAB's, PCP's etc). Manufacturing of the Safe Soil Tester & sales has started. See web site.**Activities:** We will work with other companies, organisations, Institutes, Universities to jointly develop MNT applications, IPR, patents etc. Also on FP& funded projects we would be pleased to be part of consortia. Interested in Microfluidic applications at this stage but anticipate nano applications eventually being developed. Have International connections in USA, Sweden, Brazil & Germany. (both Companies & Universities)**Value Chain:****Activities:****Market Sectors:**

Organisation: DEFRA

Address: Nobel House
17 Smith Square

SW1P 3JR

Region: London

Website: <http://www.defra.gov.uk/environment/quality/nanotech/index.htm>

Telephone:

Contact Email:

Supply Chain: Governance

Legal Status: Government

Directory Listed

Point of Contact: Steve Morgan

Position: Nanotechnologies Policy Advsor

Department:

Personal email: nano.technology@defra.gsi.gov.uk

Record Number: 7

Description: Defra is working to promote the responsible development, use and fate of nano-scale materials. Our primary roles in this respect are to manage any potential risks to the environment and to maximise the environmental benefits of nanotechnologies.

Activities: Policy activities ,Research ,Research reports

Value Chain:

Activities:

Market Sectors:

Organisation: Edinburgh University - ELEGI Initiative

Address: Queen's Medical Research Institute
47, Little France Crescent
Edinburgh
EH16 4TJ
Region: Scotland

Website: <http://www.cir.med.ed.ac.uk/content.asp?SID=46&PID=34>

Telephone:

Contact Email: Ken.Donaldson@ed.ac.uk

Supply Chain: Basic Research

Legal Status:

Directory Listed

Point of Contact: Prof. Ken Donaldson

Position: Scientific Director

Department:

Personal email: Ken.Donaldson@ed.ac.uk

Record Number: 8

Description: The Edinburgh Lung and the Environment Group Initiative (ELEGI)

Aims

To carry out research into the mechanisms of lung disease caused by inhaled pollutants towards improving diagnosis and treatment in COPD and optimising risk assessment and limiting disease progression in diseases caused by occupational and environmental particle exposures.

Background

The Edinburgh Lung and the Environment Group Initiative (ELEGI) Colt Laboratory is a laboratory carrying out research into the mechanisms of adverse health effects of air pollutants on the lungs. ELEGI was founded upon established collaborations between the Respiratory Medicine Unit of the University of Edinburgh, The School of Life Sciences, Napier University and the Institute of Occupational Medicine, Edinburgh with the financial support of the Colt Foundation. The purpose of the ELEGI initiative is to combine multi-disciplinary expertise in clinical science, cell and molecular biology and mathematical modelling, to address the problems of inhaled air pollutants and lung disease. (Source:Website)

Activities:

The ELEGI Laboratory carries out toxicology research and consultancy into the adverse effects of combustion-derived and manufactured nanoparticles in 3 main area:-

- 1) The toxicology of high aspect ratio nanoparticles (HARN) in relation to the asbestos toxicology paradigm;
- 2) the mechanism of the effects of nanoparticles on the cardiovascular system;
- 3) using in vitro tests and structure/toxicity modelling to predict nanoparticle toxicity.

Value Chain:

Activities: Toxicology Research

Market Sectors:

Organisation: Enviresearch Ltd**Address:** Herschel Building / Nanotechnology Centre

Newcastle University

Newcastle upon Tyne

Tyne and Wear

NE1 7RU

Region: North East**Website:** <http://www.enviresearch.com>**Telephone:** +44 (0) 191 243 0687**Contact Email:** christina.lye@enviresearch.com**Supply Chain:** Business Support**Legal Status:** Consultancy**Directory Listed** **Point of Contact:** Dr Christine Lye**Position:** Head of Risk Assessment**Department:****Personal email:** christina.lye@enviresearch.com**Record Number:** 9**Description:** Enviresearch will provide the best regulatory and risk assessment support in Europe for the global chemical and nanoparticle industries. We perform this by focussing on our key skills: friendliness, a flexible approach and an unwavering commitment to quality.**Activities:** We provide support for all stages of product safety evaluation. This includes advising on pertinent legislation, strategic reviews of product portfolios, advocacy with regulatory authorities, support in designing testing programmes, monitoring of studies and preparation of regulatory dossiers and reports.**Value Chain:** Consultancy, Regulations & Standards**Activities:** Risk assessment, Regulatory support, Exposure, Human, Environmental**Market Sectors:** Agriculture & Food, Coatings & Inks, Consumer Products, Cosmetics & Personal Care

Organisation: European Process Safety Centre

Address: 165-189 Railway Terrace

Rugby
Warwickshire
CV21 3HQ

Region: West Midlands

Website: <http://www.epsc.org>

Telephone: +44 (0) 1788 534409

Contact Email: lallford-epsc@icheme.org.uk

Supply Chain: Process

Legal Status: Private Limited Company

Directory Listed

Point of Contact: Mr Lee Allford

Position: Operations Manager

Department:

Personal email: lallford-epsc@icheme.org.uk

Record Number: 10

Description: The objective of EPSC is to promote best practice in process safety across Europe in the both prevention and mitigation of chemical accident hazards. The objectives are addressed in four areas: Research and Development, Legislation and regulations and know how exchange.

Activities:

Value Chain: Trade Associations & Networks

Activities:

Market Sectors: Advanced Materials, Process Plant

Organisation: FERA (Food and Environment Research Agency)

Address: Sand Hutton

York
Yorkshire
YO41 1LZ

Region: Yorkshire

Website: <http://www.fera.defra.gov.uk>

Telephone: +44 (0) 1904 462000

Contact Email: qasim.chaudhry@fera.gsi.gov.uk

Supply Chain: National Infrastructure

Legal Status: Executive Agency of Defra

Directory Listed

Point of Contact: Dr Qasim Choudhury

Position:

Department:

Personal email: qasim.chaudhry@fera.gsi.gov.uk

Record Number: 11

Description: As part of the Safety of nanomaterials Interdisciplinary Research Centre (www.snirc.org), Fera scientists have developed an extensive knowledgebase on different aspects of the new materials, products and applications of nanotechnologies, including a research portfolio on the safety of nanomaterials to human health and the environment, and regulatory aspects relating to the new technologies.

Fera experts, are playing a crucial role in the dialogue with key stakeholders over a variety of issues that have emerged from nanotechnology applications in consumer products, through membership of relevant European Commission's Scientific Committees, assisting the House of Lords' Select Committee looking into the issues relating to the use of nanotechnologies in food, participating in the EFSA opinion on the potential risks arising from nanoscience and nanotechnologies on food and feed safety, and similar issues being discussed by the Food and Agriculture Organization and the World Health Organization of the United Nations.

Activities: Recent and ongoing research at Fera includes pioneering studies into the environmental implications of nanotechnologies, fate and behaviour of nanoparticles in the environment, toxicokinetics of nanomaterials and potential toxicological effects via oral ingestion, and development of analytical methods for detection and characterisation of nanoparticles in food. Recent research is also focusing on the risks arising from nanotechnologies from a life cycle perspective - looking at materials and products throughout manufacture, transportation, use, end-of-life treatment and disposal phases, and identifying the critical stages in the whole life cycle where there might be a significant risk of exposure to nanoparticles.

Value Chain:

Activities: Research & Development

Market Sectors:

Organisation: FSA - Food Standards Agency

Address:

Region: London

Website: <http://www.food.gov.uk/gmfoods/novel/nano>

Telephone: +44 (0) 207 276 8565

Contact Email:

Supply Chain: Governance

Legal Status:

Directory Listed

Point of Contact: Dr Sandy Lawrie

Position: Head of Branch, Novel Foods and GM Safety

Department:

Personal email: sandy.lawrie@foodstandards.gov.uk

Record Number: 12

Description: The Food Standards Agency (FSA) is the UK body responsible for the assessment of novel foods and it will not assess the safety of using nanotechnology in the food chain unless it is asked to do so. If a company wants authorisation to market food produced using nanotechnology, then the Agency is obliged to assess the food safety implications.

During any such safety assessment, the Agency will consult an independent advisory committee, the Advisory Committee on Novel Foods and Processes (ACNFP). The ACNFP comprises experts who advise the Agency on a wide range of new foods and food technologies.

There are no specific criteria to consider particle size under the Novel Foods Regulation. However, the assessment of the food or food ingredient includes details of the composition, nutritional value, metabolism, intended use and the level of microbiological and chemical contaminants. Where appropriate, this might also include studies into the potential for toxic, nutritional and allergenic effects. In addition, details of the manufacturing process used to process the food or food ingredient are also considered, because novel food production processes can render a food 'novel' if it alters the final composition of the food.

As well as any such scientific safety assessment, the committee would also consider consumer concerns and ethical issues. (Source: FSA website)

Activities:

Value Chain:

Activities: Food regulation

Market Sectors:

Organisation: Health & Safety Laboratory

Address: Harpur Hill

Buxton
Derbyshire
SK17 9JN

Region: West Midlands

Website: <http://www.hsl.gov.uk/centres/nano/>

Telephone: + 44 (0) 1298 218675

Contact Email: Rosemary.Gibson@hsl.gov.uk (preferred) Or cinr@hsl.gov.uk

Supply Chain: National Infrastructure

Legal Status: Government

Directory Listed

Point of Contact: Dr Rosemary Gibson

Position: Team Leader

Department: CiNR

Personal email: rosemary.gibson@hsl.gov.uk

Record Number: 13

Description: The Centre for Interdisciplinary NanoResearch (CiNR) at HSL is at the cutting edge of research investigating the health and safety issues associated with nanotechnology. CiNR brings together a wide range of health and safety research capabilities across HSL, from real-time measurement of the number and size distribution of nanoparticles in workplaces, evaluation of the effectiveness of protective equipment, to analysis of the potential toxicity of nanoparticles via human cell-based assays and testing the explosivity of nanomaterials. The Centre inputs into many EU projects and provides advice and bespoke solutions to different types of organisations. In 2004 HSL organised, in collaboration with the UK's Health and Safety Executive (HSE) and the USA National Institute of Occupational Safety and Health (NIOSH), and hosted the First International Symposium on Occupational Health Implications of Nanotechnology.

Activities: CiNR's activities include: measurement of nanoparticles in the workplace, dustiness testing, control solutions, analysis of the effectiveness of protective equipment, toxicity testing, risk assessment, biological monitoring and analysis of explosivity.

Value Chain:

Activities: Health, safety, toxicity, occupational, measurement.

Market Sectors:

Organisation: Health and Safety Executive

Address: Redgrave Court
Merton Road
Bootle
Merseyside
L20 7HS
Region: North West

Website: <http://www.hse.gov.uk>

Telephone: +44 (0) 151 951 3017

Contact Email:

Supply Chain: Governance

Legal Status:

Directory Listed

Point of Contact: Dr Brian Fullam

Position: Unit Head of the Process Safety Corporate Topi

Department: Corporate Specialist Division

Personal email: brian.fullam@hse.gsi.gov.uk

Record Number: 14

Description:

Activities:

Value Chain:

Activities: Regulatory Authority for health and safety legislation in Great Britain

Market Sectors: Health and Safety

Organisation: Health Protection Agency

Address: National Nanotoxicology Research Centre
Centre for Radiation, Chemical and Environment
Chilton
Didcot
Oxfordshire
OX11 0RQ

Region: South East

Website: <http://www.hpa.org.uk>

Telephone: + 44 (0) 1235 22711

Contact Email:

Supply Chain: National Infrastructure

Legal Status: Government

Directory Listed

Point of Contact: Robert Maynard or Rachel Smith

Position:

Department:

Personal email: Robert.maynard@hpa.org.uk Or
Rachel.smith@hpa.org.uk

Record Number: 15

Description: The Health Protection Agency (HPA) has a responsibility to advise Government and others on the hazards and risks associated with exposure to nanomaterials. One response to this challenge has been the establishment of the National Nanotoxicology Research Centre (NNRC) at the HPA Centre for Radiation, Chemical and Environmental Hazards (CRCE). The NNRC builds upon CRCE expertise in toxicology, biokinetics, aerosol physics, air pollution and inhalation research.

Laboratory facilities are currently being developed, with experimental work scheduled to commence in 2010. Initial studies at NNRC will focus on the biokinetics of nanomaterials – their uptake via the inhalation, ingestion and dermal routes of exposure and their transport and distribution within, and removal from, the body. Other research will investigate the mechanisms of toxicity and possible health effects of nanomaterials. Work in the centre will be undertaken in collaboration with a number of UK universities and other research organisations.

Activities: NNRC initial activities will include: toxicological studies, characterisation and measurement of nanoparticles, modelling of lung deposition of nanomaterials.

Value Chain:

Activities: Public Health, Toxicology, Aerosol, Measurement

Market Sectors:

Organisation: IEG Technologies UK Ltd

Address: MK Enterprise Hub
D2 Wing, The Michael Young Building,
The Open University, Walton Hall
Milton Keynes
Buckinghamshire
MK7 6AA

Region: South East

Website: <http://www.iegtechnologies.co.uk>

Telephone: +44 (0) 1908 655263

Contact Email: enquiries@iegtechnologies.co.uk

Supply Chain: End User

Legal Status: Private Limited Company

Directory Listed

Point of Contact: Mr Stephen Forster

Position: Managing Director

Department:

Personal email: steveforster@iegtechnologies.co.uk

Record Number: 16

Description: IEG Technologies UK Ltd are soil and groundwater remediation specialists providing a turnkey remediation and risk management service using proven sustainable in situ process-based technologies. Our remediation technology systems are offered on a guaranteed fixed capital payment basis, irrespective of remediation duration, or alternatively on flexible terms to meet the requirements of a client's budget. We pride ourselves in our ability to solve the problems of our customers in a cost-effective and sustainable way to eliminate liabilities and risk, adding value in the process. IEG's track record dates back nearly 30 years. Since 1990 alone, IEG systems have been used to successfully complete over 300 remediation projects across Europe and the United States of America. In addition, with over 100 technical references in the literature, IEG's extensive experience has been supplemented by combining the latest in Research and Development and modelling with technology demonstrations and real site applications. Contaminated soil and groundwater pose a risk to both the environment and the company balance sheet. With increased regulatory intervention, together with mushrooming brownfield regeneration and planning-led redevelopment, economically viable remediation of our industrial contamination legacy needs to be balanced between the need to maximise efficiency and effectiveness, and minimisation of additional and consequential harm to the environment. It was this need for high efficiency combined with low up-front capital investment and low operational and maintenance costs that led to the development and application of IEG's innovative in situ remediation technologies. At IEG, we believe that only by implementing such specially-designed and adapted remedial technologies is it possible to reach increasingly challenging risk-based remediation goals with reasonable and calculable efforts in a truly sustainable manner.

Activities: IEG's technologies are suitable for the remediation of chlorinated solvents, petroleum hydrocarbons, creosote, pesticides and other more recalcitrant organic substances, as well as ammonia, nitrate, metals and other inorganics, by applying biological, chemical, or physical processes. Patented in the UK, Europe and the USA, IEG's in situ soil air and groundwater circulation systems for the remediation and monitoring of soil and groundwater contamination include: IEG Multi-Level Sampling Well™ (IEG MLSW™) IEG Vacuum Liquid Recovery Well™ (IEG VLRW™) IEG Vacuum Vapour Extraction™ (IEG VVE™) IEG Soil Air Circulation-Vacuum Vapour Extraction™ (IEG SAC-VVE™) IEG Soil Air Circulation-Bioventing™ (IEG SAC-Bioventing™) IEG Coaxial Groundwater Circulation-Sparge™ (IEG CGC-Sparge™) IEG Vacuum Vaporiser Well™ (IEG UVB™) IEG Soil Circular Flushing Well™ (IEG SZB™) IEG Groundwater Circulation Well™ (IEG GCW™) IEG Multi-Function Well™ (IEG MFW™) IEG Compact Vacuum Stripper™ (IEG CVS™) IEG Granular Activated Carbon Adsorption System™ (IEG GAC-Sorb™).

Value Chain:

Activities:

Market Sectors:

Organisation: Institute of Nanotechnology

Address: Suite 5/9 Scion House
 Innovation Park
 University of Stirling
 Stirling
 Stirlingshire
 FK9 4NF

Region: Scotland

Website: <http://www.nano.org.uk>

Telephone: 01786 458020 or 0141 303 8444

Contact Email:

Supply Chain: Network

Legal Status: Charity

Directory Listed

Point of Contact: Mr Mark Morrison

Position: CEO

Department:

Personal email: mark.morrison@nano.org.uk

Record Number: 17

Description: Established in 1997, the Institute of Nanotechnology (IoN) is a membership organisation that works closely with government, industry, and academia to support the responsible development of nanotechnology for the benefit of wider society. IoN services include:

- > project management, and partnership in public and privately funded projects. Current FP7 projects include: observatoryNANO (www.observatory-nano.eu); ICPCNanoNet (www.icpc-nanonet.org); FramingNano (www.framingnano.eu); NanoCharM (www.nanocharm.org) and NANO-TV.
- > support for new business including bespoke training and intelligence briefings, custom market intelligence reports and through the NanoMicroClub which offers free mentoring and access to investment and legal support (www.nanomicroclub.com).
- > a comprehensive set of modular training courses in nanomedicine, delivered in partnership with Cranfield University, and support to the commercialisation of nanomedicine through the NanoMedicine Network which comprises clinicians, academic researchers and industrialists (www.nano.org.uk/nanomednet/).
- > supporting post-graduate training in nanotechnology, through the NanoMasters Recognition scheme (www.nano.org.uk/nanomasters/index.htm).
- > a bilingual website which provides an English-language window into nanotechnology developments in China, and global news in Mandarin for Chinese organisations (www.nanochina.cn).
- > professional and corporate membership.

Activities:

- > supporting nanotechnology professionals through information provision, networking with a global community and continuing professional development
- > supporting policy makers through analysis of developments and their implications for the economy and wider society
- > partnering with universities to raise awareness of post-graduate nanotechnology training and share best practice
- > partnering with other organizations to develop new services and routes to information for professionals and the wider public
- > education and training through online resources, digital media and events
- > conferences showcasing the latest and best R&D

Value Chain: Consultancy, Regulations & Standards, SHE, Synthesis, Trade Associations & Networks, Training

Activities: Medicine, health, environment, energy, policy.

Market Sectors: Advanced Materials, Aerospace & Defence, Agriculture & Food, Analytical Equipment, Automotive, Catalysts & Absorbents, Coatings & Inks, Consumer Products, Cosmetics & Personal Care, Electronics & IT, Energy, Environmental Remediation, Medical Devices, Medical Diagnostics, Opto-electronics, Packaging, Pharmaceuticals, Process Plant, Security, Sensors, Textiles

Organisation: Institute of Occupational Medicine

Address: Research Avenue North
Riccarton
Edinburgh
Mid-Lothian
EH14 4AP

Region: Scotland

Website: <http://www.iom-world.org>

Telephone: 0131 449 8003 (direct)

Contact Email: Rob.Aitken@iom-world.org (prime contact)

Supply Chain: R & D provider

Legal Status: Company limited by guarantee; Registered Scottish Charity

Directory Listed

Point of Contact: Dr Rob Aitken

Position: Director of Strategic Consulting

Department:

Personal email: Rob.Aitken@iom-world.org

Record Number: 18

Description: The Institute of Occupational Medicine (IOM) is a major independent centre of scientific excellence in the fields of occupational and environmental health, hygiene and safety. We provide quality research, consultancy and training to help to ensure that people's health is not damaged by conditions at work or in the environment. The IOM's principal scientific disciplines are exposure assessment, epidemiology, toxicology, ergonomics and behavioural and social sciences, with a strong focus on multi-disciplinary approaches to problem solving.

We provide independent authoritative guidance about health-related issues for a range of clients including government, industry and industry associations.

Activities: Services from IOM include state-of-the-art research on exposure, toxicological modeling and risk assessment for workplace and environmental hazards, including nanomaterials and nanotechnology.

Other examples of services include the compilation of data and advice on the setting of in-house exposure limits for a wide range of toxic materials where no regulatory exposure limits exist.

In relation to REACH, we undertake reviews of toxicological, epidemiological and exposure data to inform industry and provide advice on issues relating to registration. We are involved in a Cefic-sponsored project to develop an exposure database to support industry in the preparation of registration dossier for REACH.

In recognition of the expertise of the IOM in the field of occupational health and safety, the IOM has recently been awarded a framework service contract to provide that expertise to the European Parliament Committee on Employment and Social Affairs.

Value Chain:

Activities: Occupational health and safety. Hazard and risk assessment.

Market Sectors:

Organisation: IRIS Engineering & Technology Ltd

Address: Cobalt Business Exchange
Cobalt Park Way
Newcastle Upon Tyne
Tyne and Wear
NE28 9NZ

Region: North East

Website: <http://www.iriset.co.uk>

Telephone: 07500 046320 or 0191 2804000

Contact Email: info@iriset.co.uk

Supply Chain: Business Support

Legal Status: Private Limited Company

Directory Listed

Point of Contact: Allen Jones

Position: Principal Consultant

Department:

Personal email: allen.jones@iriset.co.uk

Record Number: 19

Description: IRIS Engineering & Technology Ltd is an organisation dedicated to providing Project & Energy Management, Design Consultancy and Environmental, Health & Safety and Services. We offer Businesses, Academic Institutions and Public Sector a 'Single Source Solution' by providing a broad range of Management and Engineering Services which are tailored to fulfil Client needs. We are committed to fully understanding the current and future requirements of our Clients in order to generate cost effective, innovative solutions. IRIS E&T operates within a Client Facing Culture. This is one of our strongest competitive advantages – the best people delivering the best service in a culture of hard work, empowerment and dedication. We recognise the importance to our Clients of accurate and speedy management information. We are able to provide this by undertaking careful planning, providing frequent progress reviews and having effective controls during the life of the project being delivered. Our financial control procedures enable true costs to be identified and controlled. Ultimately this allows Clients to buy true value for money consultancy services against quality standards.
Design Services

Activities: We provide a complete range of engineering services. We can undertake feasibility and site surveys, develop project briefs, produce detailed designs, issue tender invitations and undertake site supervision
Project Management
We are confident our projects are delivered on time, in budget and in full compliance with current legislation. We have particular expertise in clean room environments in Semi Conductor, Pharma, Bio Chem & Nano Tech sectors.
Energy Management
Our Team has provided audits to over 200 local companies - we can help you reduce your energy costs. In addition IRIS E&T can use an extensive knowledge base of cost information to establish actual benchmarks to measure quality and performance.
Our overall philosophy is to keep operating costs down whilst providing an efficient service to our Clients

Value Chain: Consultancy, Design & Modelling, Regulations & Standards

Activities: Engineering Consultants, Energy Efficiency, Project Management, Design Services & Environment Health & Safety

Market Sectors: Aerospace & Defence, Agriculture & Food, Analytical Equipment, Catalysts & Absorbents, Coatings & Inks, Consumer Products, Cosmetics & Personal Care, Electronics & IT, Energy, Environmental Remediation, Medical Devices, Medical Diagnostics, Pharmaceuticals, Process Plant, Security, Sensors

Organisation: Nanotechnology Industries Association

Address: Square de Meeûs 38-40
1000 Brussels
Brussels
Belgium

Region: Overseas

Website: <http://www.nanotechia.org/>

Telephone: +32 240 161 30

Contact Email: enquiries@nanotechia.org

Supply Chain: Business Support

Legal Status:

Directory Listed

Point of Contact: Dr Steffi Friedrichs

Position: Director

Department:

Personal email: steffi.friedrichs@nanotechia.org

Record Number: 20

Description: The Nanotechnology Industries Association, NIA, was formed in 2005 by a group of companies from a variety of industry sectors, including healthcare, chemicals, automotive, materials processing, and consumer products. In September 2008, the NIA opened its office in Brussels; globally the only industry-focused trade association in nanotechnology, the NIA provides a uniquely consolidated perspective derived from a highly multi-disciplinary membership, which operates across a wide range of markets and industrial sectors. The NIA membership is made up of many varied companies, all of which at different stages of their life cycle and with a variety of interests in the huge range of technologies that derive their benefit from the nanoscale. In the NIA, these companies have a representative association to create a clear single 'voice' on behalf of the industries' views, to interface with governments, to be a source for consultation on regulation and standards, to engage with the public, to communicate the benefits of nanotechnologies, to interact with the media, and to inform the debate on nanotechnology. (Source: Website)

Activities: The NIA's Aims & Objectives are brought to fruition through the Activities, such as the creation of the Responsible Nano Code (in collaboration with Insight Investment, the Royal Society, and the UK Nanotechnology Knowledge Transfer Network). A number of permanent Committees, Strategic Projects, and Ad-Hoc Task Forces support the NIA's targeted day-to-day engagement with the public, governments, NGOs, the media, consumer organisations, companies, and other industry associations.

Value Chain:

Activities:

Market Sectors:

Organisation: NanoWatch

Address: Leatherhead Food Research
Randall's Road
Leatherhead
Surrey
KT22 7RY

Region: South East

Website: <http://www.leatherheadfood.com/nanotechnology>

Telephone: +44 (0) 1372 376761

Contact Email: help@leatherheadfood.com

Supply Chain: Network

Legal Status:

Directory Listed

Point of Contact: Ms Kathy Groves & Dr Pretima Titoria

Position:

Department:

Personal email: kgroves@leatherheadfood.com or
ptitoria@leatherheadfood.com

Record Number: 21

Description: Leatherhead Food Research's NanoWatch© Working Group was created in 2007 to investigate the use of nanotechnology in the food and drink industry, with particular emphasis on ingredients and hydrocolloids. The Working Group provides:

a platform for food, drink and ingredients companies to identify and assess technical opportunities for using micro- and nanotechnologies
a watching brief on emerging technologies that can bring benefits for both industry and the consumer
a discussion forum between food and drink companies and organisations that possess micro- and nanofabrication expertise
pre-competitive collaboration projects to demonstrate the feasibility and practicality of micro- and nanotechnology in food and drink science

Activities: Leatherhead Food Research is working with outside research groups developing mixing technologies at the cutting edge of science. The initial work has concentrated on emulsions but is intended to extend to other products. Novel ingredient functionality, healthier foods, reduction in additives and improved processes are just some of the potential benefits from nanotechnologies.

Value Chain:

Activities: Regulation advice, R & D services, networking events

Market Sectors: Food and drink industries

Organisation: Napier University

Address: Centre for Nano Safety
MERCHISTON CAMPUS

EDINBURGH
Midlothian
EH10 5DT

Region: Scotland

Website: <http://www.napier.ac.uk/nano>

Telephone: 0131 455 2376 or 2671

Contact Email: nanotoxicology@napier.ac.uk

Supply Chain: Basic Research

Legal Status:

Directory Listed

Point of Contact: Prof Vicki Stone

Position: Professor in Toxicology

Department: School of Life Sciences

Personal email: v.stone@napier.ac.uk

Record Number: 22

Description: The Centre for Nano Safety is a multi-disciplinary centre addressing the potential human and environmental effects of nanomaterials, incorporating human and environmental toxicology as well as microbiology. The Centre has been established on the basis of 13 years of nanoparticle toxicology research experience at Edinburgh Napier University, yielding over 70 publications. Products containing nanotechnology - components hundreds of times smaller than a human bloodcell - are being developed all the time. These products range from electronic gadgets and medicines to food additives and cosmetics, with applications ranging from treatments for cancer to stain resistant clothing. (Source: Website)

Research

Through research, the Centre for Nano Safety aims to identify whether a variety of nanoparticles can enter the human body and cause harm. Our work also investigates the impact of different nanoparticles on other species such as microorganisms (e.g. bacteria), plants (e.g. algae), invertebrates (insects) that live in water, sediments and soil, as well as fish. If we can find out what characteristics of nanoparticles might make them toxic, this information can be used: by industry to design safer products, by regulators to generate legislation to protect humans and the environment, and by consumers to make informed choices.

Activities: Commercial activity SAFENANO (www.safenano.org) is a collaboration with the Institute of Occupational Medicine (IOM) designed to help industrial and academic communities to quantify and control the risks to their workforce, as well as to consumers, the general population and the environment, through both information provision and consultancy services.

The centre provides input into the SAFENANO project through the provision of advice and bespoke toxicity testing services for the nanotechnology industry (Source: Website)

Value Chain:

Activities: Human toxicology, ecotoxicology, inhalation, ingestion, reproductive toxicology

Market Sectors:

Organisation: National Physical Laboratory (Environmental Monitoring)

Address: Hampton Rd

Teddington

Middlesex

TW11 0LW

Region: South East

Website: <http://www.npl.co.uk/environmental-measurement/>

Telephone: Direct - 0208 943 6788

Contact Email: enquiry@npl.co.uk

Supply Chain: National Infrastructure

Legal Status: Government owned, contractor run laboratory

Directory Listed

Point of Contact: Dr Paul Quincey

Position: Principle Research Scientist

Department: Analytical Science

Personal email: Paul.quincey@npl.co.uk

Record Number: 23

Description: Environmental issues such as climate change, pollution and air quality have a very high profile with both government and the public. Accurate measurements play a vital role in gauging the scale of anthropogenic and naturally driven effects, pollutant concentrations and the development of strategies to mitigate short- and long-term impacts.

NPL has a strong international reputation and track record in the measurement of airborne particles, including nanoparticles, through work for Defra and DfT as well as the underpinning work for the National Measurement Office. NPL currently runs the Defra Network that monitors environmental nanoparticle number concentration and size distribution. It holds ISO 17025 accreditation for calibrating Condensation Particle Counters.

It participates actively in interational standardisation activities in this area (eg ISO TC 24 and CEN TC 264.)

Activities: NPL has substantial capabilities in the following areas:

Traceable and efficient measurements for monitoring of airborne particles from around 1 nm to 10 μ m in size, including number concentration, mass concentration, surface area concentration and size distribution.

Trace chemical analysis of environmental samples including electroanalysis, elemental composition of ambient particulates and the development of the ultra-sensitive technique Surface Enhanced Raman Spectroscopy (SERS) for quantitative trace analysis.

Other chemical analyses including anions, elemental and organic carbon.

Related nanoparticle characterisation such as SEM, BET surface area, surface analysis, zeta potential and dynamic light scattering of particles in suspension.

QA/QC and validation of environmental data and traceability.

Value Chain:

Activities:

Market Sectors:

Organisation: Natural History Museum

Address: Cromwell Rd

London

SW7 5BD

Region: London

Website: <http://www.nhm.ac.uk/research-curation/research/index.html>

Telephone: +44 (0) 20 7942 5334

Contact Email:

Supply Chain: Basic Research

Legal Status:

Directory Listed

Point of Contact: Dr Éva Valsami-Jones

Position: Nanosciences Group Leader

Department: Dept. of Mineralogy

Personal email: e.valsami-jones@nhm.ac.uk

Record Number: 24

Description: NaNoRISK is a joint venture between the Natural History Museum and Imperial College London to provide a centre of excellence for the study of nano-sized materials in relation to the environment and human health.

Aims:

- * To establish multidisciplinary research into the hazards and risks of nanomaterials
- * To develop safe nanotechnology applications

See also:

<http://www.nhm.ac.uk/research-curation/research/nanorisk/index.html>

<http://www.nanoretox.eu>

Activities:

Value Chain:

Activities:

Market Sectors:

Organisation: NERC - Environmental Nanoscience Initiative

Address: Polaris House
North Star Avenue
Swindon
SN2 1EU

Region: South West

Website: <http://www.nerc.ac.uk/research/programmes/nanoscience/>

Telephone: 07800 980753 (Richard)
01793 413301 (Dominique)

Contact Email: nano@nerc.ac.uk

Supply Chain: Business Support

Legal Status:

Directory Listed

Point of Contact: Prof Richard Owen & Dr Dominique Balharry

Position: Programme Coordinator & Science Programme

Department:

Personal email: owenr@westminster.ac.uk

Record Number: 25

Description: The Environmental Nanoscience Initiative (ENI) is a collaborative programme funded by the Natural Environmental Research Council (NERC), the Engineering and Physical Sciences Research Council (EPSRC), the UK Government Department of Environment, Food and Rural Affairs (Defra) and the Environment Agency. Established in 2006, it funds research into the environmental fate, behaviour and effects of manufactured nanomaterials, with a view to providing the evidence base for policy development in this area and supporting responsible nanotechnologies innovation.

Activities: It has made 3 research calls to date, the first two (in which 17 awards were made) building capacity in the research community and the third (in 2009) a major joint call with the US Environmental Protection Agency to develop and validate models of exposure, bioavailability and effects of manufactured nanoparticles in the environment. It is now constitutes a major international programme which will continue at least until 2013.

Scientists working on awards made by the ENI programme come from a wide range of academic institutions and relevant disciplines (from materials science to ecotoxicology), and as such represent a valuable resource in terms of understanding the state of the science in this area and business / policy support. The Programme Co-ordinator acts as a point of contact with this community.

The ENI website contains detailed information of awards, grantees, and links to relevant information. It includes within its Resources section a summary brochure ('Small World') that describes the work to date and what this means for policy development.

Value Chain:

Activities: Research funding, Support for Policy Development

Market Sectors: Environment

Organisation: Responsible Nano Forum

Address: 7 Adam Street

London

WC2H 6AA

Region: London

Website: <http://www.responsiblenanoforum.org>

Telephone: +44 (0) 207 520 9086

Contact Email: hilary@responsiblenanoforum.org

Supply Chain: Business Support

Legal Status: Charity

Directory Listed

Point of Contact: Ms Hilary Sutcliffe

Position:

Department:

Personal email:

Record Number: 26

Description: The Responsible Nano Forum was formed in 2008 to inspire and promote the responsible development of nanotechnologies and to ensure the public have a real say in its development. To this end a new website has been created to explore these issues see - <http://www.nanoandme.org/>

Activities:

- Honest Broker
- To bring stakeholders together to explore and reflect on key issues and develop solutions
- Understand and promote the responsible approach to the governance, development and application of nanotechnologies
- To stimulate and undertake programmes to involve the public directly in deliberations about the direction of development.

Value Chain:

Activities:

Market Sectors:

Organisation: Safenano

Address: Institute of Occupational Medicine
Research Avenue North
Riccarton
Edinburgh
Mid-Lothian
EH14 4AP

Region: Scotland

Website: <http://www.safenano.org>

Telephone: 0131 449 8040 (direct)

Contact Email: Steve@safenano.org

Supply Chain: Business Support

Legal Status: Company limited by guarantee; Registered Scottish Charity

Directory Listed

Point of Contact: Dr Steve Hankin

Position: Director of Operations

Department:

Personal email: Steve@safenano.org

Record Number: 27

Description: SAFENANO is based at the UK's Institute of Occupational Medicine - a major independent centre of scientific excellence in the fields of occupational and environmental health, hygiene and safety.

SAFENANO is the only MNT Facility providing industry, academia and governments with independent authoritative expertise and state-of-the-art facilities to address nanotechnology risk and safety issues.

We bring together multidisciplinary expertise in hazard assessment, exposure, toxicology, occupational hygiene and risk assessment.

SAFENANO facilitates the responsible development of safe nanomaterials and nanotechnology-enabled products by making use of an integrated approach combining research, review activities, expert opinion and best practice training.

Activities: We offer research, consultancy, laboratory and field services, and training to help ensure that people's health is not damaged by conditions at work or in the environment.

Services from SAFENANO include:

> Product Safety and toxicology services for nanomaterials - developed from many years of experience in particle and fibre hazard assessment at the IOM and Edinburgh Napier University.

> Occupational health and hygiene services - designed to help industry, commerce and the public sector maintain a healthy workplace and to comply with health and safety legislation.

> Information assessment and review services - covering the breadth of nanotechnology EHS and emerging issues, built on IOM's many years of conducting reviews and preparing position papers for a variety of audiences in the private and public sector.

These services are supported by a free-to-access Information Service, focusing on interpreting and transferring the emerging scientific evidence about the potential risks to health and the environment arising from the development and use of nanotechnology.

Value Chain:

Activities: Nanotechnology safety. Hazard and risk assessment.

Market Sectors:

Organisation: SETAC-UK**Address:** School of Biomedical and Biological Sciences

The University of Plymouth

Drake Circus

Plymouth

PL4 8AA

Region: South West**Website:** <http://www.setac-uk.org.uk/>**Telephone:** +44 (0) 1752 584630**Contact Email:** r.handy@plymouth.ac.uk**Supply Chain:** Network**Legal Status:** learned society and limited company**Directory Listed** **Point of Contact:** Prof. Richard Handy**Position:** Nanoscience representative**Department:** School of Biomedical & Biological Sciences**Personal email:** R.Handy@plymouth.ac.uk**Record Number:** 28**Description:** SETAC- Europe (UK Branch)

SETAC-UK was incorporated as a private limited company on 6 December 1989, and is one of two local branches of SETAC within Europe. The UK branch aims are to promote:-

A scientific forum for environmental toxicologists and chemists in the U.K.

Multidisciplinary research into environmental problems.

Application and development of fundamental research to applied problem-solving in the environment. The Society aims to balance membership between government, industry, and academia.

Activities: Activities of SETAC-UK

SETAC-UK organises scientific meetings and workshops on any aspect of environmental toxicology and chemistry. These may range from geochemistry, environmental fate and modelling, toxic effects to biota (biochemical, cell, organism, population, or ecosystem level), risk assessment, regulatory ecotoxicology, waste disposal, sustainable development, human and environmental health, theoretical and applied chemistry and biology. These activities are co-ordinated through SETAC-UK Council, which is subject to periodic election by SETAC-UK members.

Value Chain:**Activities:** Ecotoxicology**Market Sectors:**

Organisation: SnIRC

Address:

Region: Scotland

Website: <http://www.snirc.org/>

Telephone:

Contact Email:

Supply Chain: Business Support

Legal Status:

Directory Listed

Point of Contact: Dr Robert Aitken

Position:

Department:

Personal email: rob.aitken@iom-world.org

Record Number: 29

Description: SnIRC's aims are to develop a coherent integrated program of work which will:

increase awareness of the issues relating to nanoparticles, health and environment become the UK centre for information and advice on the potential health, safety and environmental impacts of generic or specifically engineered nano-materials especially nanoparticles and nanotubes generate a comprehensive and coherent body of scientific evidence which would help towards developing relevant policies to promote UK nanotechnology growth while safeguarding workplace, public and environmental health assist UK industry in developing safe nano-materials maintain and promote an international network of researchers and regulators actively involved in the safety of nanomaterials. be the organisation for integrating UK research with corresponding US and European efforts maintain dialogue with the Research Co-ordination Group led by DEFRA in response to the Royal Society/Royal Academy of Engineering Report raise support and funding for these activities.

Activities: Partners:
Institute of Occupational Medicine (IoM) - Dr Rob Aiken
Edinburgh University - Prof. Ken Donaldson
Aberdeen University - Prof. Jon Ayres
Napier Univeristy - Dr Vicky Stone
FERA - Dr Qasim Choudhury

Value Chain:

Activities:

Market Sectors:

Organisation: University of Aberdeen**Address:** Dept. of Environmental & Occupational Medicine

Liberty Safe Work Research Centre

Foresterhill Road

Aberdeen

Scotland

AB24 2ZP

Region: Scotland**Website:** <http://www.abdn.ac.uk/deom>**Telephone:** +44 (0) 1224 558188**Contact Email:****Supply Chain:** Basic Research**Legal Status:****Directory Listed** **Point of Contact:** Prof Anthony Seaton**Position:** Emeritus Professor**Department:****Personal email:** a.seaton@abdn.ac.uk**Record Number:** 30**Description:** The department of Environmental and Occupational Medicine was established in 1985 following a government review of Occupational Health teaching. Working within the Institute of Applied Health Sciences at the University of Aberdeen, we are one of only five such University departments in the UK and are involved in a wide range of research projects covering both environmental and occupational health issues. We also provide two postgraduate degree courses and offer a range of certificates and modules targeted at specific needs within industry. In 2002 we undertook a review of our research and teaching activity and constructed an academic plan for the period 2003-2007.

The department has well equipped ergonomics and biomechanics laboratories, facilities for population surveys and equipment for measuring environmental and occupational hazards. It also has access to a positional MRI scanner, the only one of its kind in Europe. We occupy modern premises within the new Centre for Occupational Health situated in the north-western corner of the Foresterhill complex next to the National Hyperbaric Centre. (Source: Website)

Activities:**Value Chain:****Activities:****Market Sectors:**

Organisation: University of Birmingham (FENAC)

Address: Facility for Environmental Nanoparticle Analysis
and Characterisation (FENAC)
University of Birmingham
Edgbaston
Birmingham

B15 2TT

Region: East Midlands

Website: <http://www.gees.bham.ac.uk/research/fenac/>

Telephone: +44 (0) 121 414 6989

Contact Email:

Supply Chain: Basic Research

Legal Status:

Directory Listed

Point of Contact: Prof. Jamie Lead

Position: Facility Director

Department: School of Geography, Earth and Environmental

Personal email: j.r.lead@bham.ac.uk

Record Number: 31

Description: The Facility for Environmental Nanoparticle Analysis and Characterisation (FENAC) is a funded NERC facility located at the University of Birmingham. The Facility is a joint project between two colleges (Life and Environmental Sciences and Engineering and Physical Sciences) and several Schools and research centres (Geography Earth and Environmental Sciences, Biosciences, Chemical Engineering, Chemistry, Physics and Astronomy, and the Centre for Electron Microscopy).

Activities: The aim of this facility is to produce reliable data analysing nanoparticles under realistic conditions for the better understanding of biological and environmental impacts of manufactured nanoparticles. The facility will perform physico-chemical characterisation and analysis in the whole of the environmental nanoscience area but will focus on collaborative research with ecotoxicologists and toxicologists working in the field of nanotoxicology using techniques and methods such as electron and force microscopy, field flow fractionation and various spectroscopic methods.

Value Chain:

Activities:

Market Sectors:

Organisation: University of Sussex (SPRU)

Address: SPRU - Science & Technology

Policy Research

The Freeman Centre

University of Sussex

Brighton

BN1 9QE

Region: South East

Website: <http://www.sussex.ac.uk/spru/irafols>

Telephone: +44 (0) 1273 873087

Contact Email:

Supply Chain: Basic Research

Legal Status:

Directory Listed

Point of Contact: Dr Ismael Rafols

Position: Research Fellow

Department: SPRU, University of Sussex

Personal email: i.rafols@sussex.ac.uk

Record Number: 32

Description: SPRU Nanotechnologies Group

Nanosciences and Nanotechnologies (N&N) are perceived as paradigmatic examples of knowledge production characterised by the growing importance of academia-industry linkages, interdisciplinarity and social accountability, in particular unprecedented attention to their potential health, environmental, and social implications.

SPRU research aims to map developments in N&N in order to contribute to understanding of their governance. This involves exploring the structure, knowledge links and flows in research and industrial networks, relying on both qualitative case studies and quantitative analyses based on bibliometric and patent data. We focus our attention on two topics: (i) the shifting interfaces that are redrawing former organisational or disciplinary boundaries, (ii) the factors shape the directions of the innovation process towards particular uses or applications.
(Source: SPRU)

Activities: Researchers: Martin Meyer, Ismael Rafols, Paddy van Zwanenberg.

Governance of risk and innovation
Nightingale, P., Meyer, M., Morgan, M., Rafols, I., and van Zwanenberg, P. (2008). Nanomaterials Innovation Systems: Their Structure, Dynamics and Regulation. Report for the Royal Commission on Environmental Pollution.

Rafols, I, van Zwanenberg, P., Morgan, M., Nightingale, P., and Smith, A. (Submitted) The missing link in nanomaterials governance: industrial dynamics and downstream policies. Journal of Nanoparticle Research.

University-Industry linkages in N&N
Meyer, M. (2007) What do we know about innovation in nanotechnology? Some propositions about an emerging field between hype and path-dependency. Scientometrics 70(3), 779-810.

Interdisciplinarity practices and technology convergence in N&N:
Rafols, I. (2007) Strategies for knowledge acquisition in bionanotechnology: Why are interdisciplinary practices less widespread than expected?. Innovation: the European Journal of Social Science Research. 20(4), 395-412.

Value Chain:

Activities: Research

Market Sectors:

