The Institute of Materials, Minerals & Mining

INDUSTRY AND TECHNOLOGY POLICY BOARD

TECHNICAL DIVISIONS/GROUPS

MULTIDISCIPLINARY GROUPS

Sustainable Development - Energy Materials - Construction Materials

MATERIALS CYCLE	IMMa International Mining and Minerals Association															
	Applied Earth Science	Mining Technology	Minerals Processing and Extractive Metallurgy	Petroleum and Drilling Engineering	Materials Science and Technology	Castings	Surface Engineering	Ceramics (The Ceramics Society)	Composites (British Composites Society)	Light Metals	(Polymers) The Polymer Society	Iron and Steel (The Iron and Steel Society)	Automotive	Biomedical Applications	Electronics Applications	Packaging (The Packaging Society)
Materials Research and Development	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
Exploration	X	X		X				X								
Mining/Quarrying/Extraction	X	X	X	X			X	X								
Minerals Processing	X	X		X				X				X				
Materials Processing		X		X	X	X	X	X	X	X	X	X	X		X	X
Manufacture/Finishing				X	X	X	X	X	X	X	X	X	X	X	X	X
Products/Applications	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
Recycling and Sustainability	X	X		X	X	X		X	X	X	X	X	X		X	X

MINERAL INDUSTRY	**Applied Earth Science**	Exploration, economic and mining geology; geochemistry, mineralogy, remote sensing, geophysics, geostatistcs, metallogeny, deposit modelling, reserve and resource estimation, environmental baseline studies, hydrogeology, mineral economics, drilling and logging.
	Mining Technology	Planning, design and operation of underground and surface mines and quarries. Excavation support, slope stability, and rock mechanics. Water handling, pumping and surface discharge facilities. Ventilation: gas, fume and dust removal, cooling and mine environmental control. Mine engineering: mechanical and electrical reticulation and systems-machinery, equipment, fixed and mobile plant, control and communications systems. Transportation of mine production, materials and manpower. Control of subsidence and other surface effects. Safe mine closure, site remediation and re-use of land.
	Minerals Processing and Extractive Metallurgy	
	Petroleum and Drilling Engineering	The Division's interests cover all technical, educational, research and professional considerations relating to Petroleum and Drilling Engineering. These interests include associated equipment design and manufacture and cover the complete life cycle from exploration through production and abandonment. The interests of the Division are not restricted to Petroleum and include all aspects/applications of Drilling Engineering and Petroleum Engineering practices.
	Sustainable Development Group	Support and facilitate an informed debate on SD in the Institute and enable the Institute as a credible consultee on SD issues. To engage with other parties (including government(s) [regional, national and international], NGOs, industry, academia and individuals) as appropriate to better inform decision making.

MATERIALS INDUSTRY, TECHNOLOGY AND SCIENCE	**Materials Science and Technology**	**High Temperature Materials,** power generation, aerospace, petrochemical, coatings, processing, fabrication, microstructure evolution, service performance, remnant life prediction. **Sustainable Manufacturing Processes,** product & process modelling, sustainable manufacture, product and process data technology, supply chain management systems **Materials Chemistry,** thermodynamics, phase equilibria **Nanomaterials and Nanotechnology,** nanoparticles, fullerenes, nanotubes, nanocomposites synthesis, characterisation, structural & functional performance, fabrication, toxicity. **Particulate Engineering,** powder metallurgy,. **Rolling,** ferrous and non-ferrous metal rolling, flat and section rolling, science, technology and practice. **Smart Materials and Systems,** sensors and actuators, (multi) functional materials, biomimetics. **Structure of Materials,** **Superplasticity,** superplastic forming, materials processing, titanium and aluminium alloys, near net shape forming, metallic sheet processing, process simulation, tooling
	Castings	The production and the handling of liquid metals in the associated ceramics and refractories. The manufacture of patterns and other foundry tooling, and dies and moulds, and the production of cast products (usually but not exclusively metals) into shaped castings or continuously cast into semi-finished products. The design of filling and feeding systems, and the computer simulation of all aspects of the flow and solidification of metals and other materials. Particular markets are mining, petroleum and chemical plant, automotive and aeroapace industries.
	Surface Engineering	The design of a substrate and surface together to give cost effective performance enhancement. It incorporates single and duplex (multiple), traditional and innovative surface technologies in the design process. Special emphasis is placed on component processing for all sectors of manufacturing industry.
	The Ceramics Society	All activities relating to the science, technology, manufacture and processing of ceramic materials, both functional and structural, inlcuding Building and Construction Materials, Cement and Concrete, Refractories and Engineering Ceramics and whitewares and sanitaryware. Raw material extraction and processing, material preparation and manufacturing processes, applications and service life, waste and recycling of materials and by-products. Characterisation and properties of Ceramic materials.
	British Composites Society	The British Composites Society's interests cover all technical, educational and strategic considerations of composite materials, while recognising the interests of other Divisions. These interests cover composites manufacture, processing and applications.
	Light Metals	The Light Metals Division exists to support the light metals industry with particular emphasis on aluminium, magnesium and titanium alloys. The Division's interests cover all technical, educational and strategic considerations associated with aluminiumm magnesium and titanium alloys . These interests include, processing, the uses and selection of materials and development.
	The Polymer Society	The Polymer Society exists to support the polymer sector by providing a focus for knowledge exchange. Our activities cover all professional, technical, strategic and educational issues relating to polymers and materials where polymer content is significant. These interests cover all of our members working in polymer manufacture, processing, education, design, applications, end-use and end of life..
	The Iron and Steel Society	All activities relating to to the manufacture and application of steel and its products including selection and processing of raw materials and by-products, the iron, steel continuous casting, rolling, drawing, forging, pressing and other forming operations. Development and application of steels for automotive, construction, packaging, aerospace, oil and gas, energy, bearings, machining and general engineering.

END USER INDUSTRIES	**Automotive**	Design, Manufacture and End of Life of Vehicles: Knowledge Engineering, CAD, Product Model, Structure Analysis, Process Simulation, Rapid Prototyping, Joining, Tooling, Surface Finishing, Processing, Assembly, NDT, Adhesion, Rig Testing, Thermal Structural Analysis, Energy Audit, Coating, Sustainability, Recycling, Disposal, Life Cycle Analysis.
	Biomedical Applications	The Biomedical Applications Division aims to represent all materials engineers and other related technical disciplines with interests across medical applications in this multidisciplinary field. Its interests cover all aspects of the development and use of materials in medical applications, ranging from incontinence pads to aiding bone regeneration.
	Electronics Applications	The Board is concerned primarily with functional materials in electronics and related topics, and with the processing, characterisation and application of these. Amongst the materials included are: Semiconductors: bulk and thin film, crystalline, polycrystalline and amorphous. Technical ceramics: Dielectrics, ferroelectrics, pyro- and piezoelectrics Superconductors Magnetic materials Optical and optoelectronic materials Polymers with optical and electronic functionality Materials for electronic packaging and assembly
	IOP: The Packaging Society	IOP: The Packaging Society covers all aspects of packaging materials – glass, metals, paper/board/ plastics and wood. It includes conversion technology, packaging machinery, design, manufacturing, the environment and the supply chain. Education and training is at the forefront of the Society. PIABC (the Packaging Industry Awarding Body Company), an awarding body operating with IOM3 accredits venues for and courses in packaging. The prestigious Starpack, Student and Schools Starpack competitions are brands related to IOP:The Packaging Society.