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Professor James Hay

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About

Professional Development

- Fellow, The Royal Society of Chemistry (FRSC)
- Chartered Chemist (C.Chem)
- Past Editor, Thermochimica Acta
- Member, Editorial Board of Polymer
- Member, Thermal Methods Group, RSC
- Member, Macro Group UK; Polymer Physics Group
- Member, The Society of Plastic Engineers

Qualifications

- BSc (Chemistry), Glasgow, 1957
- PhD (Chemistry), Glasgow, 1960
- DSc, Birmingham, 1972

Research

Research Interests

- Effects of structure on the mechanical and physical properties of polymers, copolymers, polymer blends and composites
  PEM Fuel Cells
- Effect of physical ageing in glassy thermoplastics and morphology in partially crystalline polymers on fracture mechanisms and material properties
- Polymer bonded magnets and liquid crystalline polymers for gas sensors
- Characterisation of polyolefin copolymers
- Thermal analysis of polymers and the development of thermal analytical techniques

Sponsored Research

- EPSRC - Polymer Liquid Crystal Sensors for Analyte Detection
- EPSRC -High Temperature Self-referencing DSC
- BS Films Ltd., Wigton -Cellulose Films

Publications

Selected Recent Publications

Isothermal crystallization and spherulite nucleation in blends of polypropylene with Metallocene- prepared polyethylene, M Razavi-Nouri and J N Hay, Polymer International, 2006, 55, 6.

Phase separation in polypropylene and polyethylene blends, Mohammad Razavi-Nouri and James N Hay, Polymer Eng and Sci., 2006, 46, 889.

Evaluation of Crystallization Kinetics and Melting of Polypropylene and Metallocene-Prepared Polyethylene Blends, Mohammad Razavi-Nouri and James N Hay, J. Applied Polymer Sci., 2007, 104, 634.

Isothermal crystallization kinetics and melting behaviour of metallocene-catalysed polyethylenes, Mohammad Razavi-Nouri and James N Hay Iran Polymer Journal, 2007, 16, 105-12.

The effect of proton irradiation on the melting and isothermal crystallization of poly (ether ether ketone), A G Al Lafi, J N Hay and D J Parker, J. Polymer Sci., Part B, Polymer Physics. 2008, 46, 1094.

The effect of ion irradiation on the thermal properties of poly (ether ether ketone). A G Al Lafi, J N Hay and D J Parker, J. Polymer Sci., Part B, Polymer Physics , 2008,46, 2212.

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