

Development and commercialisation of a new methyl methacrylate process

Mark Waugh

[Lucite International](#)

A Group Company of



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On-line (vía Zoom)

CICLO CONFERENCIAS ISQCH 2020



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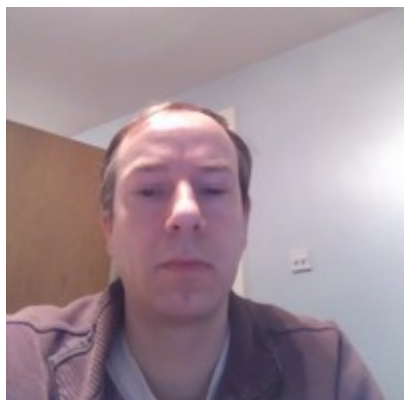
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Career overview Dr Mark Waugh

1996-2000 PhD University of Newcastle upon Tyne, working for Dr Simon Doherty. Project title "Di-Iron allenyl complexes. Their synthesis and a systematic examination of their reactivity"

2001-2004 Post-Doctoral research associate, University of Wales, Cardiff Campus, working for Professor Cameron Jones. Project title "Reactivity of low co-ordinated phosphines"

2004-present Lucite International. Current role at Lucite, Lead research Scientist. Inventor on eight patents and co-author on twenty academic publications. Dr Waugh's career at Lucite has focused on two main elements: new process development and supporting/improving existing processes. Expertise in phosphine synthesis, homogeneous catalysis and analysis.

Lucite International is the world's largest producer of the acrylic monomer methyl methacrylate (MMA). Lucite has developed a novel manufacturing method for the production of MMA called the Alpha process. The Alpha process involves the homogeneously Palladium catalyzed methoxycarbonylation of ethylene to yield the ester methyl propionate. Methyl propionate is then reacted with formaldehyde over a heterogeneous Caesium on Silica catalyst to form MMA and water. This talk will examine the development of the Alpha process and will discuss several of the technical challenges that were encountered.