PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A MATHEMATICAL, PHYSICAL & ENGINEERING SCIENCES

Preface to Marangoni and interfacial phenomena in materials processing. Proceedings of a Discussion Meeting held at the Royal Society of London on 4 and 5 June 1997

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Preface

Convection in fluids associated with gradients in surface tension, whether associated with temperature or concentration gradients, has been studied for over a century. There has been a growing awareness of their significance to a wide range of materials processes. This Meeting has brought together leading scientists who are elucidating the fundamental aspects of the Marangoni effect, with those with an industrial interest in exploiting the Marangoni effect to optimize material processing in diverse industrial sectors. The significance of the effect in liquid metal processing (such as in steel making, welding, coating, secondary melting) is shown to be particularly strong and to be a major factor in guiding the approaches to industrial control of these processes. It is hoped that these proceedings will stimulate interest in applying these concepts to other processes where they undoubtedly play an important role.

E. D. Hondros
K. C. Mills
M. McLean

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