

- Program on Chemical Safety (IPCS), WHO, Geneva, 1995; "Measuring Lead Exposures in Infants, Children and Other Sensitive Populations", National Research Council (NRC), NAS Press, Washington, 1993
- 4 A. Mayer, "Proc. First Int. ETH-Workshop on Nanoparticle Measurement", ETH Zürich, 7 Aug. 1997, 4(1)–4(11); S. T. Bagley, K. J. Baumgard, L. D. Gratz, J. J. Johnson and D. G. Leddy, "Characterization of Fuel and Aftertreatment Device Effects on Diesel Emissions", Health Effects Institute (HEI) Research Report No. 76, Sept. 1996; "UK Research Programme on the Characterization of Vehicle Particulate Emissions", ETSU, Sept. 1997
 - 5 B. R. Graskow, D. B. Kittleson, J. S. Abdul-Khalek, M. Ahmadi and J. E. Morris, "Characterization of Exhaust Particulate Emissions from a Spark-Ignition Engine", SAE Paper No. 980528; "A Study of the Number, Size and Mass of Exhaust Particles Emitted from European Diesel and Gasoline Vehicles under Steady-State and European Driving Conditions", CONCAWE Report No. 98/51, Brussels, Feb. 1998
 - 6 Contribution of Working Group I to the Second Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), "Climate Change 1995: The Science of Climate Change", ed. J. T. Houghton, Cambridge University Press, Cambridge, 1996
 - 7 Report of Working Group I to the First Assessment Report of the IPCC, "Scientific Assessment of Climate Change", eds. J. T. Houghton, G. J. Jenkins and J. J. Ephraums, Cambridge University Press, Cambridge, 1990

The Author

Michael P. Walsh is an independent international consultant on motor vehicle pollution control and fuelling issues. He currently co-chairs the U.S. EPA's Mobile Source Advisory Subcommittee and is actively involved in government and industrial advisory projects in Hong Kong, Moscow and China.

Metallurgical Technology in the Scientific Revolution

METALS AND THE ROYAL SOCIETY

BY D. R. F. WEST AND J. E. HARRIS, IOM Communications (The Institute of Materials), London, 1999, 809 pages
ISBN 1 86125 028 2, £40 (European Union)/U.S.\$80 (non-EU) + £5/U.S.\$10 postage and packing

It has long been recognised that good communication is essential for science to flourish. One of the ways in which The Royal Society, founded in 1660 and the oldest of the world's continuously-existing scientific academies, sought to improve the knowledge of natural things for the general good of mankind was by holding regular meetings of its members. In earlier times scientists communicated their thoughts and experimental data to "intelligencers" who collected and transmitted the information by letter to a network of scientific correspondents. As these scientific letters grew in importance, some scientists would have hundreds of copies of their letters printed, and widely distributed. Such developments stimulated the founding of the world's first scientific journal, the *Philosophical Transactions*, which later became an official publication for the Royal Society.

During the first two centuries of its existence, information about the metallurgical interests within the Royal Society was disseminated in the reports of numerous chemists, engineers, mathematicians and physicists. Now, two distinguished metallurgists have drawn from these contributions – written by over five hundred Fellows – and produced a volume which describes how metallurgy changed, first from an art to a science, then became recognised as a separate discipline, and was later extended to become materials science and engineering.

Readers of this Journal may recall that papers first recording the occurrence of platinum in the Chocó district of New Granada were confiscated from the

young Spanish naval officer, Antonio de Ulloa, by the British Admiralty but later returned to him following the intervention of Martin Folkes, the then President of the Royal Society. Thus, it is no surprise that one chapter in "Metals and the Royal Society" is entitled 'Precious Metals – the Platinum Group'. In fact, platinum metallurgy is one activity where the contribution from Fellows, including Percival Norton Johnson, George Matthey and Alan Richard Powell, can be traced for more than two centuries. Furthermore, most chapters concentrating on a particular subject area make reference to one or other uses of the platinum metals, or to the involvement of scientists who contributed to the advancement of platinum metallurgy.

Towards the end of the volume, two hundred and sixty-six pages are given over to biographies of some five hundred and sixty-nine Fellows and eighty-three Foreign Members whose work contributed to the metallurgical themes of this book. These are supported by a number of Appendices providing additional information mainly about their achievements.

Most readers are likely to be drawn to this worthwhile volume to check or extend their knowledge of a particular topic, or to investigate the work of an individual. However, the information within the book is so interesting that the reader will be stimulated to investigate the other chapters and fascinating biographies.

I. E. COTTINGTON

Ian E. Cottingham retired as editor of this Journal in 1994. He is interested in the history of platinum and its uses, and in new developments in platinum technology, especially for clean energy.