The second MP&EM Board meeting of 2017 was convened at the London offices of IOM3, 297 Euston Road, on 25th May.

Those IOM3 members with an interest in MP&EM are reminded that the technical journal representing our discipline is IMM, Transactions C now published by Taylor & Francis and free to download via the web site. The journal publishes high quality refereed papers at the leading edge of MP&EM.

The MP&EM annual report for 2016 is available to all IOM3 members from the website.

The CPD facility on the IOM3 web site is available for members to keep their records updated. The procedure for compliance will be explained in the July issue of Materials World, letters section, by Ian Bowbrick, Director Professional Development & Membership.

The AGM of the IOM3 will be held at 297 Euston Road, London NW1 3AD on Tuesday 11th July 2017 at 3PM, all members are welcome to attend.

Deputy Chief Executive Graham Woodrow is to retire later in the year. Graham will be well known to older members of the Division from his position in Doncaster prior to the merger.

The MP&EM division is planning to arrange the Geometallurgy2017 Conference at 297 Euston Road over 13-14 December this year.

The IMMa meeting was chaired by Martin Cox, current IOM3 President as Prof Pat Foster from the Camborne School of Mines was unable to attend due to pressure of work. Martin recently visited Brazil and Argentina and gave a presentation to the IMMa meeting on Mining in Argentina.
Obituary: Phil Gray, Hon FIMMM, FREng, 1927 - 2017

Extractive Metallurgy has lost one of our foremost protagonists with the passing of Phil Gray. He started his working life with the Atomic Energy Establishment just after WW2, but will be best remembered for his work at ISP and as an independent consultant. He was very supportive of the Warner process, but recognised in later life there were insuperable constraints to its practical realisation. He was also concerned that financiers were losing interest in the risks associated with innovation. Phil was President of the IMM in 1984 and was awarded the Institute’s prestigious Futers gold medal in 2013 following nomination by the MPEM Board. A full Obituary will be published in Materials World in July.

Some reflections from work colleagues of Phil:

Phil came to work for me on the EBF the pilot plant for the ISP. Later he became development manager and I became superintendent of the ISP at Swansea. In our respective capacities we often disagreed but always in a gentlemanly way, Phil could always tell you that you were talking nonsense in a friendly way.

Later I worked for him at Davy McKee. While we did not always agree we always remained firm friends. He was a prolific author and provided inspiration for the future of the profession. Over all the years he was a valued colleague and always a real pleasure to work with. **Harry Gibbs**

Phil to me was impeccably British, professional and a great leader. He has certainly passed away with the great respect of his peers. It was a privilege to know and work for him. **Wayne Hopkins**

On my first visit to the USA, I travelled with Phil to New York en route to Carteret to obtain a licence for the Amax Process and we had to spend a weekend in The Big Apple. Phil asked if I would be OK on my own for the weekend as he was going to upstate New York to visit friends and do some bell ringing.

Being a young, inexperienced Process Engineer and relatively new to Davy, I asked about expenses and what the company would cover over the weekend. He told me to do all the sightseeing I wanted, but not to buy any American girlfriend a fur coat! **Colin Whittaker**

I remember him as a very professional gentleman who was an absolute pleasure to work with. **Bill Greenwood**
Library News

Discussions have been ongoing for some years on the involvement of IOM3 with OneMine which offers immediate access to full copies of technical papers from the participating institutes. The MP&EM Board has been most concerned to see progress in this area. One of the problems is the copyright ownership of the IOM3 journals. This must have been resolved as IOM3 has told OneMine it does now fully intend to join. OneMine has come back with a business proposal which is being considered. There is still the issue of access to OneMine by IOM3 members as OneMine presently only contains papers of interest to IMMa members. One of the possible options is for paid rather than free access.

Bids have been received for the scanning of IMM hardcopy documents (and others) published prior to on line access so that they can be made available on line. A test group of documents from an IMM 1984 Ultramafic conference have been successfully uploaded to One Mine.

Retirement of two key information staff has meant the Materials Information Service being focussed rather more on referral/signposting and less on direct response by in-house materials specialists, but this does not affect the provision of minerals and mining information which has always been via IMMAGE literature searching or, in some cases, referral to the relevant boards’ expertise. Email: Frances.Perry@iom3.org

This is a very busy time of major expansion and development for both the physical and digital libraries in preparation for the Tata Steel library official launch and move from the pilot stage towards the main scanning and digitising of the IMM, IMinE and other IOM3 publications.

This has involved straightening out and interfiling the new Tata Library in Grantham re-boxing, labelling and listing the entire journal collection. Signage and labelling are shortly to be added and it is hoped that publicity photographs will be taken early in June, ready for an official launch of the joint libraries as what is to be called the Materials Archive.

The interfiling of the Minerals and Mining Library journals which was nearing completion has had to be put on hold yet again. The tidying of the IMM Library serials list and book catalogue so that both can be available on the website alongside the Tata and IOM Library catalogues is nearing completion. MP&EM Division is the mineral division most likely to find coverage enhanced by the advent of the Tata library which has a certain amount of overlap in its content.

The Senior Information Advisor (Materials) Hilda Kaune and Frances Perry the Information Advisor Minerals and Mining have been working 2 days a week at Grantham to incorporate the Tata Library into the National Materials & Mining Archive in the new storage facility adjacent to the Boilerhouse. The Archive will be formally opened on 18th July by the President, Martin Cox.
The Board represents the interests of members of the MPEM division of the IOM3. Clearly this relies on members of the division making their concerns known.

Membership of the Board and a link to send an email can be found at the IOM3 website [www.iom3.org/mpem](http://www.iom3.org/mpem) or by clicking on the left hand link “Our Communities” on the IOM3 home page menu bar, scroll down to “Special Interest Groups”, then down to “Minerals and Mining Division”, to reveal “Mineral Processing and Extractive Metallurgy Division”. While you’re there copy the full website address, open the settings menu in your browser and add the address to “open a new tab page” on start-up. This will make it much easier to locate your website!

The MPEM Chairman, Tony Francis’ email address is t.francis@iom3.org and the email for the newsletter editor is on the last page.

The Board meets 3 times a year on the last Thursday in January, May and September at IOM3 297 Euston Rd, London. The meeting is followed by an IMMa meeting which co-ordinates the activities of the Minerals and Mining Divisions. The MP&EM Chairman attends meetings of the IOM3 Council and ITPB (Industry and Technology Policy Board) giving us a voice in the running of the Institute.

IMMa is an umbrella organisation comprising members of the four individual Extractive Divisions, Applied Earth Science, Mining Technology, Oil & Gas and MP&EM.

There are currently nine Board members.

The main activities of the Board are looking after the professional interest of Mineral Processing Engineers and Extractive Metallurgists who are members of IOM3. We encourage new membership wherever appropriate and through our divisional brochure. Relevant news and information is disseminated to our members through the MP&EM microsite and this newsletter. We promote and advance the profession through arranging Technical Conferences and aim to convene at least one a year. These events have been extremely successful and this year we have scheduled Geometallurgy2017 which follows on from the earlier Geometallurgy2014.
Current MPEM Board

Tony Francis FIMMM graduated in Metallurgy from the Royal School of Mines and has over 35 years’ experience working in the Minerals Processing & Extractive Metallurgy industry. Presently he is an Independent Consultant to the MP&EM Industry as a Director of his own company Francis Minerals Consulting Ltd. Previously he was corporate senior metallurgist with European Goldfields Limited. Tony was engaged in all of the companies process related activities spanning project initiation to plant design and construction. Tony gained extensive operational experience in the copper mines of Zambia where he ended up as Concentrator Superintendent at the Nchanga Mine complex. His activities have included Research & Development, managing testwork programmes, minerals processing plant senior management, plant engineering design, project management and consulting. He has worked in base and precious metal process plants and projects throughout the world. Prior to taking up the Chair of the MP&EM Board in 2011 he was a member since its formation in 2005.

John Monhemius FIMMM started in the RSM as an assistant lecturer in the Metallurgy Department in the mid 1960s, in the heyday of the Nuffield Research Group in Extraction Metallurgy, which was led by Professor Denys Richardson, FRS. After taking five years to complete his PhD, followed by a three-year leave of absence from Imperial to teach hydrometallurgy at the Federal University of Rio de Janeiro in Brazil, he worked his way up the academic ranks, eventually becoming (the last) Dean of the RSM in 2001, the year of the 150th Anniversary. He retired from the Deanship and full-time academia at the end of 2004. After two or three years enjoying the novelty of retirement, he staved off impending mental ossification by joining the board of Anglo Asian Mining plc, a junior gold mining company with assets in Azerbaijan, as a part-time NED. Since then, he has had great fun “doing it” instead of “teaching it” and has helped the company develop from a simple, small, open pit–heap leach, gold operation into a multi-mine company with heap leaching, agitation leaching and flotation facilities, producing copper concentrates, as well as 75koz of gold per year.

John was the first Chair of the MPEM Division and was largely responsible for setting up the IMMa umbrella organisation to co-ordinate activities of the four Minerals and Mining divisions.
Dr. Vasant Kumar FIMMM, Head of Materials Chemistry in the Department of Materials Science at the University of Cambridge, has over 25 years of research experience in electrochemistry, energy and environmental devices, minerals chemistry and recycling of metals. Currently, Dr Kumar’s research group’s work is underpinned by harnessing of interfacial chemical reactions in a variety of applications that range from mineral carbonation to sensors to batteries, fuel cells and photocatalytic reactions. Dr Kumar is the Editor of IOM3s journal Mineral Processing & Extractive Metallurgy since 2003.

He works very closely with industry and research organizations and has successfully transferred many technologies to industry. For example, Dr Kumar, has developed a new environmentally clean-process for recovering electro-active paste material from automotive- and off-grid renewable storage batteries for making new batteries (paste-to-paste recovery). A pilot plant has been set up near Birmingham using this technology under license from the University of Cambridge.

Dr Kumar has shown a method for using steel industry waste dust as a reagent for refining liquid iron, currently done using relatively expensive magnesium. He is participating in full scale plant trials taking place in Slovakia between University of Cambridge, Carmeuse (Belgium) and US Steel.


David Meadows FIMMM graduated from Camborne School of Mines, with a BSc (Hons) in Mineral Processing Technology. He started his career in operational roles in the gold and diamond mining industry in South Africa with JCI and De Beers. In the late 1990’s he joined Bechtel International Mining and Metals in San Francisco, Santiago, Brisbane and Belo Horizonte. He then spent four years with Phelps Dodge working on Project Development for the Tenke Fungurume in the Democratic Republic of Congo, Climax Molybdenum Concentrator in the USA and joined Cerro Verde 1 in Peru as Commissioning Manager in Peru. In 2008 he moved to FL Smidth leading its Process Technology group globally across multiple copper and gold projects, together with development of its world class ore testing and mineralogical analysis facility. In 2015 he returned to Bechtel Mining and Metals in the USA as Global Manager Metallurgy. He is currently Manager Copper Center of Excellence.
Mike Cave FIMMM went to Zambia after graduating in metallurgy from Cambridge in 1968. He initially worked at Rhokana Smelter and the TORCO plant on the Copperbelt before transferring to the ISF/Sinter at Kabwe lead zinc mine. He was Manager Metallurgical at Kabwe and Mufulira before returning to the UK in 1987. He worked for Davy McKee Contracting Engineers in Stockton for 20 years (subsequently Aker Kvaerner, now Jacobs). This provided a more diverse range of experience including the commissioning of HZL’s ISF in Rajasthan India, a refractory gold ore circulating fluid bed roaster in Mali, a manganese sinter plant at Hotazel, South Africa and a lightweight aggregate sinter plant in China. He was also involved in many major studies including jarosite smelting in Holland, magnesia production in Australia and Saudi Arabia, zinc and copper smelters in India, ilmenite processing in Mozambique and clay calcining for brick manufacture in the UK. In 2007 he retired from full time work and formed his own company, Mike Cave Pyro Ltd as an independent consultant, though he finds living in the Lake District a full time occupation these days!

Mike was involved with the IMM Council from his return to the UK, chairing the Library committee for many years.

Gawen Jenkin AIMMM is Professor in Mineral Resources at the University of Leicester. He has over 30 years experience as a geochemist and mineralogist with an emphasis on mineral exploration and ore genesis, in particular gold. Recent projects have included the Cononish gold deposit, Scotland, Cyprus VMS and a re-appraisal of Broken Hill mineralisation. Recently he has led a major collaboration with Prof. Andy Abbott in Chemistry at Leicester to develop the application of deep eutectic solvent ionic liquids to mineral processing, working together with mineral companies in the UK, Sweden, Peru and the Philippines. He is co-principal investigator on a current £3.3M NERC SoS consortium project “Tellurium and Selenium Cycling and Supply (TeaSe)” leading the work package on application of deep eutectic solvents to by-product recovery. He is also a co-investigator on the EU funded SOCRATES European Training Network for the sustainable, zero-waste valorisation of critical-metal-containing industrial process residues. He was Chair of the UK Mineral Deposits Studies Group 2010-2013. He is a SEG Fellow, Member of the Mineralogical Society and ProfGrad IMMM. His mission is to bridge the gap between metallurgists and geologists, since if the ore can’t be processed it isn’t an economic deposit!
WE WOULD LIKE TO HEAR FROM YOU!

We’re always interested in hearing from our members! If you would like to share a story, publish an article or just provide some feedback on the newsletter, please get in touch! All enquiries can be sent to our editor:

Mike Cave

Email: mikecavepyro@gmail.com

HOW DO I JOIN?

Individual membership of the MP&EM Division is achieved by joining the Institute of Materials, Minerals and Mining. You can join IOM3 online at www.iom3.org/join to get immediate access to member benefits, or you can complete our printed membership application form. For details of membership grades and professional qualifications visit: www.iom3.org/membership

Company membership: More information about Industry Affiliate membership and an application form are available at: www.iom3.org/ias

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