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Acta Materialia 51 (2003) 6007–6019



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## Acta Metallurgica, Inc./Acta Materialia, Inc. 1953–2002\*

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Accepted 31 August 2003

The success of the application of the basic sciences in meeting the needs of World War II led to a new surge of research in the solid state science of metals. The publications from this research were widely scattered throughout the physical, chemical, and metallurgical literature. John Herbert Hollomon, as the leader of an interdisciplinary group of scientists and engineers, recognized the need for a unifying journal in which the fruits of such research could be gathered more effectively. Starting in April 1947, this budding concept was the subject of discussions and correspondence between Herb Hollomon and leading scientists in the field worldwide. The response was mostly enthusiastic, with a few notable exceptions. André Guinier and Sir Lawrence Bragg felt that the field would best be served by expanding the scope of Acta Crystallographica. Maxwell Gensamer, then Chairman of

the Institute of Metals Division of the American Institute of Mining and Metallurgical Engineers (AIME), thought it would be an unnecessary duplication of their “*Transactions*”. (Clearly it would be a competitor!) Finally in 1950, at the request of Arthur Focke, then president of the American Society for Metals (ASM), Herb Hollomon prepared a proposal for such a journal. The proposal was also sent to the Institute of Metals Division of AIME. Herb Hollomon and Jack Low presented the proposal to the ASM Board, and on 31 August 1951, with the strong support of John Chipman, then President of ASM, and James Austin, Past President ASM, the ASM Board of Trustees authorized a grant of \$50,000 to establish the new journal. A subsequent grant of up to an additional \$50,000 was authorized to cover early deficits. The total amount contributed by ASM over the years was \$62,720.

William Eisenman, Executive Secretary of ASM, appointed a committee consisting of Herb Hollomon, Cyril Stanley Smith and Bruce Chalmers to plan and formulate details for the publication of a new journal on the science of metals. In January 1952, an interim board of directors of the “International Journal for the Science of Met-

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\* The Golden Jubilee Issue—Selected topics in Materials Science and Engineering: Past, Present and Future, edited by S. Suresh.

als” was established. The Board included Cyril Stanley Smith, Chairman, Amos Shaler, Vice-Chairman, J. Herbert Hollomon, Secretary/Treasurer, Bruce Chalmers and Frederick Seitz. Bruce Chalmers was appointed interim Editor, and resigned from the Board. Wallace Waterfall of the American Institute of Physics (AIP) was appointed interim Business Manager, and the University of Toronto Press was selected as the Publisher. (Raymond Bayless of ASM attended the early meetings, but was not available to serve as Business Manager.) In addition to ASM as a Sponsoring Society, Cooperating Societies included AIME, AIP, and the metallurgical, chemical and physical societies of Brazil, England, Finland, France, Germany, India, Italy, Japan, Spain, and Sweden. *Acta Metallurgica* was selected as the name of the journal.

Cyril Stanley Smith appropriately noted the reasons for the new Journal 50 years ago in the Preface to the first issue of *Acta Metallurgica*, and today his logic is equally valid. He wrote: “A new journal should be founded only if a real need exists. If the need is merely for more pages of conventional material for an established audience it is far better to increase the size of present journals than to start a new one. A new journal should create a new grouping of readers; it should serve as a medium of expression for a new combination of authors; and it should serve as a focus for the integration of types of knowledge the relation of which is newly perceived.” The complete Preface by Cyril Stanley Smith can be found in Appendix A.

The first issue of *Acta Metallurgica* appeared on 7 January 1953 with 111 pages. It contained 11 papers, two book reviews, one letter to the editor, and an introduction by Cyril Stanley Smith, Chairman of the Board (see above and Appendix A). It was published 6 times each year until 1957, when the frequency was increased to 12 issues per year. On 22 January 1953, the first permanent Board of Governors was appointed, including Cyril Smith as Chairman, Amos Shaler as Vice Chairman, J. Herbert Hollomon as Secretary/Treasurer, James Austin, Ulrich Dehlinger, Maxwell Gensamer, Eric Rudberg, W.A. Baker, and Frederick Seitz. Bruce Chalmers was appointed permanent Editor. There were 16 Cooperating Societies, and 11 Associate

Editors in appropriate countries throughout the world. Publication time averaged 5 months and there were 2000 subscribers. The cost of the first year’s subscription was \$6 (US) for members of the Sponsoring Society (ASM), \$9 for members of the Cooperating Societies, and \$12 for those who were not members of either.

On 22 October 1953, the International Journal for the Science of Metals was incorporated under the laws of the State of New York. The Board of Governors consisted of nine members: five appointed by the Sponsoring Society, and four elected by the Cooperating Societies from representatives appointed by each Society. The first meeting of the Corporation was attended by Cyril Stanley Smith, Chairman, Amos Shaler, Vice-Chairman, Herb Hollomon, Secretary/Treasurer, James Austin, Fred Seitz, John Chipman, Max Gensamer, W.A. Baker, Ulrich Dehlinger, George Roberts, Walter Boas, and Roman Smoluchowski. There was one Sponsoring Society and 19 Cooperating Societies. It is important to note that all members of the Board were (and still are) leading scientists in the field, who knew the role to be served by the Journal. On 23 July 1954, the Board met for the first time overseas in Amsterdam, and established the policy to meet outside the US every 3 years with the overseas Associate Editors and Cooperating Society representatives. These meetings provided opportunities for the Board to be advised of special concerns and interests of the European scientific community. For example, page charges were commonly charged by American Journals, and reimbursed by American research sponsors, whereas European research sponsors did not support page charges. As an international journal, *Acta Metallurgica* insisted in its financial arrangements with the Publisher that there would be no page charges, and that authors would receive a reasonable number of reprints free of charge. Subsequent overseas meetings have been held in Brazil, England, France, Germany, Hawaii, Israel, Italy, Japan, the Netherlands and Spain.

The journal accepted papers in English, French and German, and abstracts were provided in all three languages, regardless of the language of the paper. Over the years, an increasing proportion of papers were submitted in English, regardless of the

country of origin, as authors sought to maximize their readership. French authors, proud of their language, were the last to convert, and Associate Editor Pierre Coulomb translated abstracts into French for all papers for many years until his retirement in 1990. Finally, since 1993 *Acta Metallurgica et Materialia* (now *Acta Materialia*) has been published only in English. The practice of publishing abstracts in French and German was also discontinued during the 1990s, primarily because of lack of demand from authors and readers.

In 1955, Herb Hollomon met Robert Maxwell, President of Pergamon Press, during a transatlantic flight, and discussed the possible publication of the Journal by Pergamon Press. The close relationship and understanding between these two men was an important factor in the success of the Journal and its subsequent progenies. With strong support from Robert Maxwell for Herb Hollomon's ideas, Pergamon became the Publisher and business manager on 15 October 1955. Robert Maxwell frequently attended Board meetings, and provided advice and counsel as well as flexibility with respect to Pergamon's role in the further developments of the Journals. The first issue under the Pergamon imprint appeared in January 1956.

From its earliest days, the Board served as considerably more than an oversight group to the Journal Editor(s). In many ways it has resembled a miniature technical society, establishing and terminating new Journals and other publications, awards, lectureships, and conferences. Its small numbers somewhat limited the scope of its undertakings, but enabled it to respond quickly to suitable opportunities.

In 1957, Herb Hollomon visited USSR, and saw the scope and breadth of research being published in Russian, which was not available to western scientists. Starting in 1957, Herb Hollomon sought and obtained funds from National Science Foundation (eventually totaling \$249,017) to publish English translations of five Russian Journals: *The Physics of Metals and Metallography*, *Metallurgy Abstracts A and B*, *Metallurgist*, *Metal Science and Heat Treatment of Metals*, and *Refractories*; and in addition four books: *Contemporary Problems of Metallurgy*, *Metallurgy and Metallography of Pure Metals*, *Theory of Order–Disorder in Alloys*, and

*Technology of Ceramics and Refractories*. Bruce Chalmers served as Editor, and the publishing was undertaken by Pergamon, Consultants Bureau, Scripta Technica, and MIT Press. Walter Hibbard was appointed business manager for Russian translations. By 1965, the translations were self-supporting, and publication was taken over by commercial publishing companies. Pergamon continued to publish *The Physics of Metals and Metallography* with Bruce Chalmers remaining as Editor, and ASM published the abstracts. The balance of funds was returned to NSF, and the Board was no longer involved in Russian translations.

Also in 1957, The American Institute of Mining, Metallurgical and Petroleum Engineers (AIME) became a sponsor of Acta Metallurgica, Inc. The financial support from AIME was welcomed during those difficult years, and AIME was given a seat on the Board along with the four ASM seats, and the four seats which were appointed collectively by the Cooperating Societies.

In 1962, Herb Hollomon resigned to become US Assistant Secretary of Commerce, and Walter Hibbard was elected Secretary/Treasurer. Mary K. Fortune, who joined the Acta organization in 1957 maintained the accounts, the minutes and all the workings of the Board, and therefore, it was important that the office of the Secretary/Treasurer remain near to her. In 1963, the American Society for Testing and Materials (ASTM) became a Sponsoring Society for 10 years, withdrawing in 1973. ASTM was also given a seat on the Board in 1963, and when they withdrew AIME was allowed to name two Board members. The allocation of seats on the Board (ASM—4, AIME (later The Minerals, Metals, Materials Society (TMS))—2 and Cooperating Societies—4) remained this way until 2002, when the constitution was amended to add two more Board members—one was the Coordinating Editor of the Acta Journals and the twelfth member to be appointed by the Board to serve a special need which might develop as the goals and/or directions of Acta change in the future. In 1966, Walter Hibbard resigned to become Director of the US Bureau of Mines, and Robert Fullman was elected Secretary/Treasurer and served in this capacity for 31 years, plus an additional 4 years as the Treasurer.

By 1967, *Acta Metallurgica* was flourishing.

The number of letters to the editor and short summaries was so large that Chalmers proposed that a new journal, *Scripta Metallurgica*, be established to publish these items quickly, using offset printing. The Board approved and the first issue appeared 6 October 1967. The annual volume grew rapidly to 980 pages by 1970. In 1968, the title of the Corporation was changed to Acta Metallurgica, Inc., and in 1969 Michael Ashby was appointed Deputy Editor.

Over the years, the Board of Governors was blessed with distinguished Chairmen including Cyril Stanley Smith, Maxwell Gensamer, Adolph Schaefer, Clarence Lorig, Morris Cohen, Michael Bever, Oscar Marzke, John Fellows, Harry Paxton, Robert Jaffee, Walter Owen, Julius Harwood, Gareth Thomas, William Gerberich, Bernard Kear, Thaddeus Massalski and Karl Gschneidner, Jr. (the current Chair). They provided wise and skillful leadership in response to the needs of the Journal and the scientific community.

In 1972, following a suggestion by Robert Maxwell and funded by Pergamon Press, an *Acta Metallurgica* Gold Medal was established to honor demonstrated ability and leadership in materials research. In the usual do-it-yourself fashion of the organization, Fullman drew up a design, including an area traced from the coarse pearlite microstructure in ASM's *Atlas of Microstructures*, and circulated it to the Board for approval. With characteristic flair, Maxwell provided a medal substantially larger in diameter than a Nobel Prize medal, although hollow to keep the cost reasonable.

Candidates for the Gold Medal were nominated by Sponsoring and Cooperating Societies, and selection was made by three judges appointed by the Board. The first gold medal was awarded to Bruce Chalmers in 1974, followed annually by W.G. Burgers, Alan Cottrell, John Cahn, Mats Hillert, David Turnbull, Johannes Weertman, Morris Cohen, Charles Barrett, Jacques Friedel, Jack Christian, Egor Orowan, Michael Ashby, Robert Balluffi, John Hirth, James Li, Jun Kondo, Jerome Cohen, William Nix, Peter Haasen, Thaddeus Massalski, Vaclav Vitek, Peter Hirsch, Tsuyoshi Masumoto, Jean Philibert, Anthony Kelly, Chain-Tsuan Liu, Robert Cahn, and Gareth Thomas (the 2003 winner). When one distinguished scientist received

his medal, noticing its relatively light weight for its size, he went into his laboratory and measured its density. He then called Fullman, irately accusing Acta of passing off a gold-plated aluminum medal. He was advised to look more closely at the medal's edge to discern the seam. In 1994, the medal was redesigned, smaller in diameter but solid. The first of the new medals was awarded to Thaddeus Massalski. The Gold Medal was again redesigned in 2000 to reflect the name change of the Corporation to Acta Materialia, Inc. Chain-Tsuan Liu was the first recipient of the new design.

In 1974, Bruce Chalmers resigned as Editor after guiding the Journals for 22 years to a triumphant success. Michael Ashby was appointed Editor of *Acta Metallurgica* and L.M. Brown was appointed Deputy Editor. John Hirth was appointed Editor of *Scripta Metallurgica* and Ben Wilcox was appointed Deputy Editor. David Rigney succeeded Wilcox 2 years later.

Meanwhile Herb Hollomon had suggested the publication of a new journal described as an international publication of practical and scholarly studies concerning the causes and effects of the interactions between materials and society. After studies by Julius Harwood, the new journal was approved, and titled *Materials and Society*. Walter Hibbard was appointed Editor with William Vogely as Co-Editor. Associate Editors were appointed in appropriate international areas. The first issue appeared in May 1977, and the Journal was published four times a year. Included in the Journal were the annual TMS/ASM lecture on Materials and Society, the annual seminars on Mineral Economics of the AIME Washington Section, and many issues on special topics. In 1987, Walter Hibbard resigned after 11 years as Editor of *Materials and Society*. William A. Vogely was appointed Editor and Joel Clark was appointed Co-Editor.

Since 1975, groups of short survey papers on specific topics were published in *Scripta Metallurgica* as Viewpoint Sets and 27 have been published through 2002. In 1978, Ashby proposed that *Acta Metallurgica* publish comprehensive Overviews of rapidly developing areas of material science with authors commissioned by the Editor. The first Overview appeared in January 1979, and the 138th was published in volume 50 (2002). In 1980, it

was proposed that the Board sponsor Acta-Scripta workshops on newly emerging subjects at the leading edge of materials science. Three have been sponsored and published by Pergamon as hard-bound books: *Dislocation Modeling of Physical Systems*, *Decomposition of Alloys—The Early Stages*, and *Amorphous Metals and Semiconductors*. Collections of articles from *Acta Metallurgica* and *Scripta Metallurgica* have been published as hardback review books. The first *Materials and Society* workshop was sponsored in 1986 and concerned Metals Demand. The proceedings were published as volume 10, number 3 of the journal.

Starting in 1984, Outstanding Paper Awards were made each year to recognize papers published in *Acta Metallurgica* and *Scripta Metallurgica*. These awards were discontinued in 1997.

In December 1988, John Hirth moved the *Scripta Metallurgica* office from Ohio State University to Washington State University, and Howard Hamilton replaced David Rigney as Deputy Editor.

During 1986–1987, the Board began developing a new award named for J. Herbert Hollomon to honor leadership and publication of research in the area of materials and society. The first J. Herbert Hollomon Award was given to Cyril Stanley Smith in 1989. The award recognizes contributions to understanding the benefits of materials technology to society, and/or contributions to materials technology that have had a major impact on society. It consists of a Steuben glass sculpture on a suitably inscribed base, a certificate, and a cash award. The sculpture is suggestive of a nearest-neighbor atomic arrangement in close-packed crystal structure, or a three dimensional ternary liquidus phase diagram depending upon the viewer's perspective. Subsequent winners were Alan Cottrell, Robert Jaffee, Frederick Seitz, Robert Fullman, Morris Cohen, Albert Westwood, Merton Flemings, Masato Sagawa, William Bonfield, Mary Good, Craig Barrett, and Larry Hench (the 2003 winner). Alan Cottrell and Morris Cohen have received both the Gold Medal and the Hollomon Award.

In 1990, the names of the Journals were changed to *Acta Metallurgica et Materialia* and *Scripta Metallurgica et Materialia* to reflect the broader scope that had gradually taken place and to

emphasize an intent to continue that trend. In 1996, the names were further changed to *Acta Materialia* and *Scripta Materialia*, and in 1999 the name of the Corporation was changed to Acta Materialia, Inc.

In 1990, in response to requests at an overseas Board meeting, Acta/Scripta Metallurgica Lectureships were established, intended to provide educational lectures primarily to countries outside the mainstream of materials science. The Lecturers were provided travel funds and honoraria from Acta Metallurgica, Inc. while the host country Cooperating Society provided for local living expenses. Two Lecturers were selected each year for a 2-year term. The Lecturers have been Robert Gifkins, King-Ning Tu, Robert Rapp, Brian Wilshire, Thaddeus Massalski, J.D. Embury, Hywell A. Davies, John Campbell, Malcolm McLean, M. Meshii and Alton Romig. In 1991, the program was expanded to allow a Cooperating Society to initiate a request for a particular individual to lecture, other than the selected Acta/Scripta Lecturers. This feature was used only by the Sociedad Argentina de Metales. The Lectureship program was discontinued in 1995.

In 1991, after several years' debate, it was decided to terminate publication of the journal *Materials and Society*. The final issues were published in 1992.

Since 1991, the proceedings of Acta/Scripta Conferences, containing both invited and contributed papers, have been published as special issues of the Journals. All of the papers are refereed by an editorial team which includes an Acta/Scripta Editor to assure that the normal quality standards are maintained.

A new journal, *NanoStructured Materials*, was initiated in 1992. The Principal Editors were Bernard Kear, Richard Siegel and Thomas Tsakalakos with W.E. Mayo serving as Deputy Editor. The Journal was published bimonthly, and there was an extra volume semiannually to publish the proceedings of the International Conference on Nanostructured Materials. Starting in 2000, the contents of *NanoStructured Materials* were incorporated in *Acta Materialia* and *Scripta Materialia*, and *Nanostructured Materials* was discontinued as a standalone journal.

In 1992, Lindsay Greer replaced L.M. Brown as Deputy Editor of *Acta Metallurgica et Materialia*. *Scripta Metallurgica et Materialia* increased its publication frequency to 2 volumes of 12 issues per year, and Jeffrey Hoyt was appointed as a second Deputy Editor. By 1996, the number of volunteer Associate Editors had grown to 17, from as many countries. Some authors submitted their manuscripts via the local Associate Editor, and the Associate Editors helped to attract appropriate papers from their countries.

In 1991, Pergamon Press was acquired by Elsevier Science Publishers (now known as Elsevier). The relation between Acta Materialia, Inc. and the Publisher has continued with little change, including the funding of the Gold Medal and retaining the Pergamon imprint.

In 1995, Michael Ashby and John Hirth retired as Editors of *Acta Metallurgica et Materialia* and *Scripta Metallurgica et Materialia*, and the editorial structure of these Journals was revised under the leadership of Karl Gschneidner and Gareth Thomas. The new structure consisted of an Editor-in-Chief and four Principal Editors, each with a Deputy Editor, who were assigned to accept or reject papers for publication in both Journals in their respective area of expertise. Gareth Thomas offered to serve as the Editor-in-Chief and this offer was quickly accepted by the Board. The Principal Editors were Hirotaro Mori for Materials Characterization; Timothy Sands for Physical Properties; Subra Suresh for Mechanical Properties; Richard Wagner for Synthesis and Processing. Their Deputy editors were Akira Sakai, Kannan Krishnan, Andreas Mortensen and Fritz Appel, respectively.

The position of Editor-in-Chief was discontinued in 1998. Gareth Thomas was retained as an Ex-officio “Technical Director”. Thomas had long been an ardent advocate of moving the Journals into new areas, particularly those of interest to the students who would be the next generation of materials scientists. In his new assignment, he provided long range planning guidance to the Board, and arranged for Acta/Scripta Conferences to help identify the Journals with these new areas. Many of the Overviews and Viewpoint Sets arranged by the Editors were for the same purpose. Thomas

continued as Technical Director until April 2002. Subra Suresh assumed the role of Coordinating Editor of both *Acta Materialia* and *Scripta Materialia* in 1998. Subra Suresh, in his role as Coordinating Editor, was also made a voting member of the Board of Governors in 2002.

In 1998, Ramamoorthy Ramesh (Satish Ogale, Deputy Editor) replaced Timothy Sands as the Editor for Physical Properties. In 2000, several changes were made: Kazuhiro Hono (and Yoshio Sakka as Hono’s Deputy) took over the editing of manuscripts in Materials Characterization from Hirotaro Mori for both *Acta Materialia* and *Scripta Materialia*; and two new Editors (Deputy Editors) were added to help deal with the increased number of submissions: Ladislav Kubin (Patrick Veyssi re) for Mechanical Properties and Andreas Mortensen (Heinrich Hofmann) for Process/Phase Transformations. The two new Editors were responsible for *Scripta Materialia* submissions.

In 2000, the journal covers were changed, incorporating a tetrahedron representing the processing-structure/characterization-properties-theory focus of materials science. In 1998, the publication frequency of *Acta Materialia* was increased to 18 issues per year, and in 2000 it was increased to 20 issues.

To mark the birth of the new century and the new millennium, *Acta Materialia* published the Millennium Special Issue in 2000. This issue, entitled “A Selection of Major Topics in Materials Science and Engineering: Current Status and Future Directions” was edited by Subra Suresh. Over 2000 hardbound copies of this issue have been distributed worldwide and this issue has been one of the most highly cited issues in the history of *Acta Metallurgica/Materialia*.

In view of the rapidly rising rate of manuscript submission, four more Editors were appointed in 2002, two for each of the Acta Materialia, Inc. journals. Joining the three *Acta Materialia* Editors were Subhash Mahajan and David B. Williams and their Deputy Editors, Ray W. Carpenter and Herman F. Nied, respectively. The two new *Scripta Materialia* Editors were John H. Perepezko and Dorte Juul-Jensen and their respective Deputy Editors Eric E. Hellstrom and Wolfgang Pantleon. These additions brought the total number of Edi-

tors to nine, where Kazuhiro Hono edits manuscripts for both Journals.

Since 1995 there have also been some Deputy Editor changes; these include: A.E. Giannakopoulos and S. Mark Spearing for Subra Suresh; and Markus O.W. Thönissen for Richard Wagner.

With the ever-increasing improvements in image and scattering techniques, the Board recognized the need to optimize the resolution of its printed micrographs to imaging at the atomic level, resolution of fine structure in diffractograms, etc., so as to retain and increase submissions from researchers using these methods. This was accomplished in 1999 with the cooperation of Elsevier using modern image processing methods. Color printing has been available for some time. Also in 1999 the current issues of the two journals were first available electronically via Elsevier's Science Direct. In May 2003, *all* of the issues of *Acta Materialia* and *Scripta Materialia* and their progenitors became available electronically.

As of March 2002 papers could be submitted for publication electronically, and by the end of the year over 90% of the submissions for both *Acta Materialia* and *Scripta Materialia* were in the electronic format. At the time of writing of this article, nearly 100% of the submissions in both *Acta Materialia* and *Scripta Materialia* are received and processed electronically. All the manuscripts published in *Acta Materialia* and *Scripta Materialia* are now archived electronically, and any color figures provided by the authors are permanently archived in electronic format in color, irrespectively of whether the published hardcopy contains color or gray scale figures.

In 2002, *Acta Materialia* had an impact factor of 3.1 (its highest rating ever), which is an excellent mark for a primary materials science journal, making *Acta Materialia* one of the top journals in the field, if not the top one. *Scripta Materialia's* impact factor is also continuing to increase, reaching a value of 1.17 in 2002, placing it in about the middle of this group of journals. The two journals published 399 and 312 papers, respectively, in 2002.

Late in 2002, as a consequence of Gareth Thomas' urgings the Acta Board decided to proceed with the publication of a new journal covering the structure/property relationships of biomaterials and

biotechnology with an expected launch date of the first issue in 2005–2006 time frame.

Beginning in 1997, Thaddeus Massalski became Executive Secretary of the Board of Governors, with the able assistance of Dora Moscatello, Administrative Associate. The office of Treasurer was separated from that of Secretary, and became Ex-officio. Fullman retired as Treasurer at the end of 2000, after 35 years of service on the Board. He was replaced by Harry Paxton, a former Board Chairman. Mary Fortune continues as Business Manager, by far the longest tenured member of the "Acta family".

A complete listing of the 88 scientists/engineers who served as Board members is presented in Appendix B. Also given are the Officers (Appendix C), the Editors of the various Journals (Appendix D), and the Professional Staff (Appendix E). All of these persons, along with the referees who have reviewed manuscripts for all of the Journals, have made valuable contributions during their years of service to make the first 50 years of Acta Materialia, Inc. a resounding success.

## Acknowledgements

Parts of this article, covering the first 35 years, were previously published as "A Concise History of Acta Metallurgica, Inc., and the Journals *Acta Metallurgica*, *Scripta Metallurgica*, and *Materials and Society*", by W.R. Hibbard, in *Robert Maxwell & Pergamon Press*, copyright 1988, Pergamon Press, plc. The authors wish to acknowledge the assistance of Mary K. Fortune (Acta Materialia, Inc.), Carol Smith and Jennifer Fitzpatrick (both of Iowa State University) in compiling the list of Acta Materialia, Inc. (and its progenitors) Board members and officers. We also wish to thank Prof. Gareth Thomas (University of California, Berkeley), Ted Massalski (Carnegie-Mellon University), Subra Suresh (Massachusetts Institute of Technology) and Mary K. Fortune (Acta Materialia, Inc.) for their comments on various aspects of the history of Acta Materialia; and Amanda Weaver (Elsevier) and Dora Moscatello (Acta Materialia, Inc.) for supplying dates and other details necessary in compiling this brief history of Acta Materialia, Inc.

## Appendix A. The preface to volume 1 of Acta Metallurgica (January 1953)

A new journal should be founded only if a real need exists. If the need is merely for more pages of conventional material for an established audience it is far better to increase the size of present journals than to start a new one. A new journal should create a new grouping of readers; it should serve as a medium of expression for a new combination of authors; and it should serve as a focus for the integration of types of knowledge the relation of which is newly perceived. The volume of scientific literature related to metallurgy is already so vast that those suggesting the addition of yet another publication must clearly see that it will contribute significantly to professional maturity and not just divert material from the older journals.

The realignment of knowledge is a sign of progress, with new fields continually crystallizing and receiving professional approval. For various purposes and at various times the same areas of knowledge will be differently grouped, and it is the opinion of the founders of this journal that a partial regrouping is now taking place in metallurgy. *Acta Metallurgica* will deal with the whole science of metals: it will draw upon the basic sciences of physics and chemistry on the one hand and upon the science to be inferred from metallurgical practice on the other, with considerable dipping into other applied sciences and the characteristics of other materials where these will assist the understanding of metals. The application of established knowledge to industrial problems is the right and proper field for the metallurgical societies themselves and is admirably covered by their established publications.

The metallurgist, part scientist, part artisan, and part manager, is placed where many fields of knowledge and intuitive skill merge. In the past he has been more concerned with the application of knowledge than with its advancement or rigorous formulation. He has, nevertheless, frequently been required to develop the science of his materials and has made many contributions to the understanding of chemical and physical principles. Now, however, metallurgy is too broad to be encompassed by a single human mind: it is essential to enlist the interest of the "pure" scientists, under whatever name, and to increase the number of metallurgists whose connections with production and

managerial problems are partially sacrificed in order that they may be more concerned with physics and physical chemistry as a framework for useful metallurgical advance. Even now much of the literature of a research metallurgist is to be found in the professional journals of the physicist and chemist and he can no longer depend on the metallurgical journals alone. Similarly, the solid-state physicist and the physical chemist have shown an increasing interest in metallurgical journals. This situation exists in all major countries doing scientific research, yet the bulk of such specialized publications in any one country hardly justifies a special journal; an international journal, therefore, seems particularly appropriate. Though such a journal has been discussed for many years on both sides of the Atlantic, it remained only an idea until Dr. John H. Hollomon and Dr. John Chipman supplied the necessary energy of activation, and the American Society for Metals the necessary initial funds.

The journal cannot constitute the whole professional reading of a metallurgist or other scientist concerned with metals; indeed, it will have failed if it does, for its purpose is to break down, rather than to encourage, specialization. It will be a catastrophe if the scientific metallurgist loses touch with his more practical colleagues, or if the solid-state physicist ceases to be interested in the broad field of physics. It is hoped that the new journal will serve, not to force us all into one mold, but rather to cultivate the benefits of diversity. Contact with neighboring sciences, and with one's own field as seen from the viewpoint of another country, cannot help but prove stimulating.

"*Acta Met.*," as it will doubtless come to be called familiarly, is off to a good start; it has some excellent papers lined up for early issues, and an admirable source of readers in the wide membership of its sponsoring and cooperating societies. Its progress will depend on the degree to which it continues to meet the changing needs of the future.

CYRIL STANLEY SMITH  
Chairman, Board of Governors

Institute for the Study of Metals  
University of Chicago  
November, 1952



**Appendix B. Board members**

Name			Years served
Anderson	W.	Kermit	1968–1973
Antia	Dara	P.	1990–1993
Austin	James	B.	1953–1959
Baker	W.	A.	1953–1956
Berghout	C.	W.	1967–1969
Bever	Michael	A.	1969–1972
Birchenall	Charles	E.	1958–1959
Birnbaum	Howard	K.	1996–2003
Boas	Walter		1954–1966
Brandon	David	G.	1998–2003
Brittain	John	O.	1979–1981
Brophy	Jere	H.	1997–2003
Carney	D.	J.	1959–1960
Changxu	Shi		1995–1998
Chipman	John		1954–1955
Clark	D.	S.	1958–1960
Cohen	Morris		1964–1968
Conrad	Hans		1977–1979
Convey	John		1970
Crafts	Walter		1961–1962
De Hosson	J.	Th.M.	1993–1996
Dehlinger	Ulrich		1953–1955, 1961–1963, 1967–1970
Ellis	William	C.	1957–1959
Epremian	Edward		1971–1973
Fellows	John	A.	1966–1969
Follansbee	Paul	S.	1993–1998
Fullman	Robert	L.	1966–2000
Gensamer	Maxwell		1953–1956
Gerberich	William	W.	1985–1989
Gifkins	Robert	C.	1981–1989
Gilman	John		1969
Gray	Allen	G.	1983–1985
Gschneidner, Jr.	Karl	A.	1993–
Guard	Ray	E.	1972–1978
Haasen	Peter		1973–1985, 1988–1993
Hardwick	Dallis	A.	2002–
Harwood	Julius	J.	1974–1985
Headlam-Morley	K.		1964–1968
Hibbard, Jr.	Walter	R.	1962–1965
Hillert	Mats		1969–1986, 1990–1992, 1997–2000

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Name			Years served
Hollomon	John	Herbert	1953–1962
Hughes	Trevor		1978–1981
Jaffee	Robert	I.	1975–1991
Jillson	David	C.	1961–1964
Kear	Bernard	H.	1985–1992
Kinsman	Kenneth	R.	1995–
Koenig	John	H.	1966–1967
Lacombe	Paul		1971–1989
Lindroos	Veikko		1991–1994
Lorig	Clarence	H.	1960–1966
Maddin	Robert		1960–1961
Margolin	Harold		1969
Marzke	Oscar	T.	1965–1969
Massalski	Thaddeus	B.	1990–
Mehl	Robert	F.	1961–1965
Moore	Richard	E.	1969–1972
Neumann	Peter		1994–
Ogawa	Shiro		1976–1979
Owen	Walter	S.	1974–1978
Paxton	Harold	W.	1970–1974, 2001–
Pennington	W.	A.	1962–1965
Post	Anthony		1972–1978
Rathenau	Gert.	W.	1957–1960, 1966
Read, Jr.	William	T.	1957–1959
Roberts	George	A.	1954–1959
Rudberg	Eric		1953
Schaefer	A.	O.	1957–1960
Schenck	Hermann		1970–1974
Scott	James	L.	1973–1976
Scott, Jr.	William	W.	1985–
Seitz	Frederick		1953
Semchyshen	Marion		1981–1985
Shaler	Amos	J.	1953
Shewmon	Paul	G.	1977–1981
Smith	Cyril	S.	1953–1955
Smith	George		2001–
Smolouchowski	Roman		1954–1956, 1965–1967, 1983–1986
Sourdillon	M.	Andre	1965–1967
Sproull	Robert	L.	1959–1963
Sullivan	J.	D.	1964–1965
Suresh	Subra		2002–
Thomas	Gareth		1981–2002
Troiano	Anthony	R.	1965–1968

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Name			Years served
Ver Snyder	Francis	L.	1979–1983
Wagoner	Robert	H.	1999–2001
West	David	R.F.	1994–1997
Wood	Robert	B.	1988–1991
Young	G.	Macdonald	1959–1961

### Appendix C. Officers

Name			Years served
<i>Chairman</i>			
Smith	Cyril	S.	1953–1955
Gensamer	Max		1956
Schaefer	A.	O.	1957–1960
Lorig	Clarence	H.	1960–1963
Cohen	Morris		1964–1966
Marzke	Oscar		1967–1968
Fellows	John	A.	1969
Bever	Michael	A.	1970–1971
Paxton	Harold	W.	1972–1974
Jaffee	Robert	I.	1975–1976
Owen	Walter	S.	1976–1977
Harwood	Julius	J.	1978–1981
Thomas	Gareth		1982–1985
Gerberich	William	W.	1986–1988
Kear	Bernard	H.	1989–1991
Massalski	Thaddeus	B.	1992–1995
Gschneidner, Jr.	Karl	A.	1996–
<i>Secretary-Treasurer</i>			
Hollomon	John	Herbert	1953–1962
Hibbard, Jr.	Walter	R.	1962–1965
Fullman	Robert	L.	1966–1996
<i>Executive Secretary</i>			
Massalski	Thaddeus	B.	1997–
<i>Treasurer</i>			
Fullman	Robert	L.	1997–2000
Paxton	Harold	W.	2001–

**Appendix D. Editors**

Name				Years served
(a) Acta Materialia (and its progenitors)				
<i>Main/Coordinating Editors</i>				
Chalmers	Bruce	F.	Editor	1953–1974
Ashby	Michael		Editor	1974–1994
Thomas	Gareth		Editor-in-Chief	1995–1998
Suresh	Subra		Coordinating Editor	1998–
<i>Technical Editors</i>				
Suresh	Subra	B.	Editor/Principal Editor	1995–
Wagner	Richard		Editor/Principal Editor	1995–
Mori	Hirotaro		Principal Editor	1995–2000
Sands	Timothy		Principal Editor	1995–1998
Ramesh	Ramamoorthy		Principal Editor	1998–2000
Hono	Kazuhiro		Editor/Principal Editor	2001–
Mahajan	Subhash		Editor	2002–
Williams	David		Editor	2002–
(b) Materials and Society				
Hibbard, Jr.	Walter	R.	Editor	1977–1987
Vogely	William		Co-editor	1977–1987
			Editor	1988–1992
Clark	Joel		Co-editor	1988–1992
(c) NanoStructured Materials				
Kear	Bernard	H.	Principal Editor	1992–1999
Siegel	Richard	W.	Principal Editor	1992–1999
Tsakalakos	Thomas		Principal Editor	1992–1999
(d) Scripta Materialia (and its progenitors)				
<i>Main/Coordinating Editors</i>				
Chalmers	Bruce	P.	Editor	1967–1974
Hirth	John		Editor	1974–1994
Thomas	Gareth		Editor-in-Chief	1995–1998
Suresh	Subra		Coordinating Editor	1998–
<i>Technical Editors</i>				
Suresh	Subra		Principal Editor	1995–1999
Wagner	Richard		Principal Editor	1995–1999
			Coordinating Editor	2000–2001
Mori	Hirotaro		Principal Editor	1995–2000
Sands	Timothy		Principal Editor	1995–1998
Ramesh	Ramamoorthy		Principal Editor	1998–2000

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Name			Years served	
Kubin	Ladislav	H.	Editor/Principal Editor	2000–
Mortensen	Andreas		Editor/Principal Editor	2000–
Hono	Kazuhiro		Editor/Principal Editor	2001–
Perepezko	John		Editor	2002–
Juul-Jensen	Dorte		Editor	2002–

### Appendix E. Professional staff

Name			Years served	
<i>Administrative Associate</i>				
Moscattello	Dora			1997–
<i>Business Manager</i>				
Fortune	Mary	K.		1957–