



Congratulatory Messages from ISIJ Honorary Members



My Congratulations on your Diamond Anniversary, Noting that Carbon is a Key Constituent of Steel

Harshad Kumar Dharamshi Hansraj Bhadeshia
 Tata Steel Professor of Metallurgy, University of Cambridge

A journal is defined primarily by the novelty and rigour of its content. It has the purpose of disseminating and archiving knowledge in the hope that it reveals nature in a way that makes a difference to society as a whole. There is an ethical standard to follow in its publication strategy, based on the accurate evaluation of research rather than on crude parameters that lead to a corruption of science.

Tetsu-to-Hagané Overseas began publication in 1961, morphed into *Transactions of ISIJ* to the present *ISIJ International*. In this 60 year history, the journal has established itself as an elite resource for steel metallurgy, covering all aspects from the raw materials to final products, rather like the modern integrated steel works that first appeared in Japan. This coverage is unique, that there is unashamed specialisation in its persistent focus on all things ferrous, which makes it the first port-of-call for metallurgists. The fact that the journal is published by a learned society rather than a commercial enterprise, gives comfort to authors that their work will be assessed fairly and not on ill-conceived notions about impact.

There have been some remarkable articles published, many of which qualify as the best in all of the physical sciences. The strange supra-ductile TWIP steel, cleanliness where oxygen concentrations less than 6 ppm are possible, mathematical modelling that actually solves a technological goal and reveals new science rather than simply reproducing what we know, the odd phenomenon of cryogenic treatment where imperceptible changes improve macroscopic properties, hydrogen trapping implemented in bridge-bolts, water modelling of a tundish, a “so simple yet so complex”

Since 2004 when graphene was first isolated, there have been 1.01 million papers published. In the same period, 1.52 million papers communicated on steels. Graphene has virtually no application, whereas 1.6 billion tonnes of steel is produced and used annually to improve the quality of life. Some of the best papers on steel have been published in *ISIJ International* and long may that continue. My congratulations on your diamond anniversary, noting that carbon is a key constituent of steel.



© 2020 The Iron and Steel Institute of Japan. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs license (<https://creativecommons.org/licenses/by-nc-nd/4.0/>).



Contribution of a Traditional Journal to New Metallurgy

Ruiyu Yin
 Member of Chinese Academy of Engineering

I feel honored and admired to congratulate the journal of *ISIJ International* for the 60th publication anniversary. Over the past 60 years, the journal has grown vigorously into a first-class journal with increasing international reputation in metallurgy and materials. The journal has attracted the attention of Chinese scholars especially since China started to reform and open. Nowadays, most of Chinese Ph.D students in metallurgical engineering read this journal and learn a lot. I want to express my gratefulness to your journal.

Steel industries are entering the third decades of the 21st century. The development strategy of steel industrial is the same all over the world, to the green production including “zero” carbon technology and to the intelligent production.

The contribution of steel industrials is turning into triple functions from former single production function, namely high-efficiency low-cost clean steel production, efficient energy conversion and recirculation, consumption and recycling of large-scale social wastes.

Under the green and intelligent production of steels, metallurgy keeps developing. The new metallurgy should include micro-scale fundamental metallurgy such as physicochemistry of metallurgical processes, process metallurgy, and newly developed macro-scale dynamic metallurgy (metallurgical process engineering), which are integrated into a new metallurgical discipline system through information technology. With great efforts of scholar all over the world, I hope it becomes in reality in the near future.

Good luck with *ISIJ International*.



© 2020 The Iron and Steel Institute of Japan. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs license (<https://creativecommons.org/licenses/by-nc-nd/4.0/>).



The Prominent Medium in All that is Steel

Hae-Geon Lee

Professor Emeritus, Pohang University of Science and Technology (POSTECH)

Steel is frequently considered the “gold standard” against which emerging structural materials are compared. What is often not realized is that this is a moving standard, with regular and exiting discoveries being made in the context of iron and its alloys.

Looking back around half a century, one can easily appreciate that knowledge and technology in iron and steel have made a phenomenal growth. Japan has undoubtedly been a key role player in both quality and quantity. Among contributions made by Japan to the world of ferrous technology, one may not hesitate to put the effort of ISIJ to the top tier. It has been diligent in disseminating scientific and technological information through meeting and publication. This includes Tetsu-to-Hagané and ISIJ International among others. The English journal “ISIJ International” in particular, succeeding to its predecessors of “Tetsu-to-Hagané Overseas” and “Transactions of The Iron and Steel Institute of Japan,” has offered a superb forum to the international community of scientists and technologists in iron and steel to exchange their research achievements and matured ideas, but under a tight scrutiny. It is my firm belief that ISIJ International has greatly contributed to enhancing both the breadth and depth in its role assigned. By the breadth it is meant the contribution to spreading emerging new and advanced information to the international community, and by the depth its contribution to further deepening the quality of science and technology in respective areas. As an academic having worked in the area of steel, it has been my pleasure to choose this journal as the top priority in preference to others for publication of my work, mainly because it provides a medium, the prominent medium in all that is steel.

Amid the prevailing circumstances in that scholarship in ferrous materials has been declining in many parts of the academic world, it is my sincere wish that ISIJ International continue to play its pivotal role in encouraging promising scientists and technologists worldwide to be actively involved in ferrous technology.

I wholeheartedly congratulate those who made ISIJ International so successful in service of publication for 60 years, the diamond jubilee.



© 2020 The Iron and Steel Institute of Japan. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs license (<https://creativecommons.org/licenses/by-nc-nd/4.0/>).



Warmest Congratulations to ISIJ on its Jubilee!

John William Morris, Jr.

Professor of Metallurgy, University of California, Berkeley

Warmest congratulations to ISIJ on its jubilee! I have published there with some regularity over the years, have maintained a subscription of decades, and regularly review issues for the interesting and important articles they contain. It is, in my opinion, clearly one of the world’s premier technical journals in the field of metallurgy, and is the leading journal whose primary focus is on the science of iron and steel. The editors, contributors and technical reviewers who have maintained the high quality and the scientific focus of this journal over the years deserve the thanks of the whole metallurgical community.



© 2020 The Iron and Steel Institute of Japan. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs license (<https://creativecommons.org/licenses/by-nc-nd/4.0/>).