



Charles H. Ward



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*IMMI* Editor-in-Chief

## TMS content update

### *IMMI* Introduces Data Descriptor Article Classification

*Integrating Materials and Manufacturing Innovation (IMMI)*, TMS's open access journal available at [www.immijournal.com](http://www.immijournal.com), has introduced a unique data descriptor article classification. A data descriptor is a standalone record of scientific work that presents a detailed account of the methodology used to collect experimental or simulation data, as well as a thorough description of the resulting data and a brief discussion of the data's anticipated value.

*IMMI*'s editorial and peer review process will evaluate submitted data descriptor articles based on the technical quality of the methods used to generate the data, reusability of the datasets within the community, the completeness of the data description, and consistency with existing community standards. "*IMMI* will be the first journal in materials science and engineering to provide this type of peer-reviewed research outlet for experimentalists and modelers alike for the benefit of the community at large," said Charles H. Ward, *IMMI* Editor-in-Chief.

Ward said that the data descriptor classification leverages the advantage that *IMMI* offers authors to share data and codes through an archived, indexed, and citable source. "It's a bonus that both the articles and datasets will be open access to all," he said.

The *IMMI* Editorial Board developed the data descriptor classification to provide the materials community with access to high quality and unique materials datasets for a variety of research purposes. "Data generated by materials scientists and engineers can be extraordinarily rich in content, but typically authors only report on one facet of the data collected. Even then, they present the data in a reduced form," Ward said. "We also know that materials experiments or simulations can often be very resource intensive, yet we tend to treat the data they produce as an expendable in the course of research."

"A lot of data that otherwise might be of further use is being left on the table—undiscoverable and unusable by others,"

Ward continued. "Other disciplines have found that wider access to research data provides value to their communities by enhancing scientific discovery and making the entire research process more efficient."

The data descriptor classification is the latest milestone in *IMMI*'s steady evolution as a recognized resource for sharing innovative efforts to build an integrated engineering framework or to solve a pervasive need related to materials and manufacturing. More than 30 articles have been published since *IMMI*'s inception in 2012. Ward noted that *IMMI* has been making an impact since its earliest days.

"The first two thematic issues we published, Three-Dimensional Materials Science and Use of Digital Data in Materials Science and Engineering, got the journal off to a good start in publication rate. They also helped establish *IMMI*'s place in the community as a journal focused on issues supporting 'integration' within materials science and engineering—integration of experiment with computation, integration of science with engineering, and integration of materials with manufacturing," said Ward.

Ward is looking forward to building on the success of these initial thematic issues, with one on Integrated Computational Materials Engineering of Composites and another on Multidisciplinary Design Optimization slated for future publication. "These themes are great examples of expanding the discussion space of *IMMI* in a valuable direction," he said.

"I'm really happy with how our authors have responded to *IMMI* and have recognized the unique role it can play," Ward continued. "I look for *IMMI* to continue to expand its horizon in both the materials and applications we discuss, as well as introduce more topics on innovation in science and engineering that support integration."

To access details on *IMMI*'s unique features and benefits, including its data descriptor article classification, or to submit a manuscript, visit [www.immijournal.com](http://www.immijournal.com).