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**TMS 2020**

**149<sup>th</sup> Annual Meeting & Exhibition**

February 23-27, 2020 • San Diego, California, USA



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## Materials Design

### Purveyors of Processing Science and ICME: A SMD Symposium to Honor the Many Contributions of Taylan Altan, Wei Tsu Wu, Soo-Ik Oh, and Lee Semiatin

The ability to design and repeatedly produce complex, highly durable components for demanding aerospace applications is generally taken for granted these days, but this was not always the case. Edisonian techniques and institutional knowledge were the prevailing methods to choose alloys and develop processing routes with a primary focus of form over function. Little attention was paid to material microstructure and its evolution over the course of processing, and even fewer attempts were made to model it. This all changed when a small group of scientists and engineers came together at Battelle Memorial Institute in the late 1970's and worked on a wide range of metals processing techniques. Their early success, leveraging the momentum building in the steel industry during World War 2, stemmed from their combined expertise in mechanics, metallurgy, processing science, and computational methods.

The contributions of Taylan Altan, Wei Tsu Wu, Soo-Ik Oh, and Lee Semiatin to the field of processing science are so vast and impactful that it is the Structural Materials Division's great pleasure to honor their lifetime of achievements at TMS 2020. Paying homage to the honorees lifelong commitment to developing and validating process models, this symposium will remain alloy-agnostic and instead keep central themes of processing, process simulation, and modeling the evolution of microstructure/texture/defects during processing.

Hence, this symposium seeks papers on any metallic material system in the following areas:

- Wrought processing
- Powder production
- Powder processing
- Melting and casting
- Solid-state joining operations
- Additive manufacturing
- Machining operations
- Application of numerical methods in processing

Preference will be given to papers that combine experiment with modeling for greater insight into material behavior and also those that span more than one of the above topic areas. Invited speakers from academia and government labs will highlight the honoree's technical breadth and depth while those from industry will highlight the impact of their work in a production environment.

#### ORGANIZERS

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Abstract Deadline is July 1, 2019. Submit online at  
[www.programmaster.org/TMS2020](http://www.programmaster.org/TMS2020).

Questions?

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