

JOIN US AT:

THE WORLD COMES HERE.

TMS 2017
146th Annual Meeting & Exhibition



February 26 – March 2, 2017
San Diego, California, USA

MATERIALS PROCESSING FUNDAMENTALS

The key interest areas to be covered in this symposium are all aspects of the fundamentals, synthesis, analysis, design, monitoring, and control of metals, materials, and metallurgical processes and phenomena.

Topics will include:

- Experimental, analytical, physical and computer modeling of physical chemistry and thermodynamics
- Modeling on the transport phenomena in materials processing and metallurgical processes involving iron, steel, non-ferrous metals, and composites
- Second-phase particles in metals and processes, such as non-metallic inclusions and bubbles in metals (steel, aluminum, silicon, magnesium etc.) or gas bubbles in slag or electrolyte (foaming, gas evolution or injection); the fundamentals (experimental studies or theoretical studies) on the nucleation, growth, motion, and removal of these second-phase particles from the molten metal or reactors
- Physical chemistry, thermodynamics and kinetics for the production and refining of rare earth metals
- Control of industrial processes in the field of extraction and processing of metals and materials: novel sensors for hostile-environment materials processes, such as online inclusion detection, temperature, and velocity in molten materials, surface condition of hot moving products, etc.; innovative online sampling and analysis techniques; models for real-time process control and quality monitoring systems

ORGANIZER

Antoine Allanore, Massachusetts Institute of Technology, USA

PROCEEDINGS PLANS

Papers from this symposium will be a part of *EPD Congress 2017*. Manuscripts for accepted abstracts are due September 1.

SYMPOSIUM SPONSOR

TMS Process Technology and Modeling Committee



PLAN TO JOIN US AT TMS2017. VISIT WWW.TMS.ORG/TMS2017 FOR MORE INFORMATION