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John F. Elliott LECTURER

at

Carnegie Mellon University Materials Science & Engineering

LECTURE

The AIST John F. Elliott Lectureship was established in 1990. This honorary lectureship is designed to acquaint students and engineers with the exciting opportunities in chemical process metallurgy; inspire them to pursue careers in this field; inform the public of the contributions of chemical process metallurgy and materials chemistry to the association; and honor the late Prof. John Elliott of the Massachusetts Institute of Technology for his many accomplishments and the leadership that he provided during his career.

BIOGRAPHY

Kenneth S. Coley joined McMaster University in 1996 as an associate professor and gained tenure in 1999. He served as chair of the Materials Science and Engineering Department from 2005 to 2009, during which time the number of undergraduate students enrolled in the program doubled. Prior to McMaster, he was the British Steel Lecturer in Process Metallurgy at the University of Strathclyde from 1989 to 1996. Before joining the University of Strathclyde, he was higher scientific officer and then senior scientific officer at the National Physical Laboratory (U.K.) from 1986 to 1989. He holds a patent for "Process for Producing Metal Powder" and has had more than 50 papers published. He has also delivered lectures on oxygen steelmaking practices at international steelmaking conferences.

ABSTRACT

High-Temperature Kinetics From the Lab to the Steel Plant

This lecture will introduce the exciting world of reaction kinetics while illustrating how kinetic studies are now being applied in industrial-scale process models.

Over the past several decades, there have been many outstanding fundamental studies of metallurgical kinetics. However, whilst this work offers fascinating insight into the nature of steelmaking processes, it is only relatively recently that it has been possible to apply kinetic data from the laboratory in predicting process outcomes. The author will discuss kinetic studies from his laboratory and from other research groups around the world highlighting the way in which this data is being used in predictive process models. Kinetic studies and related models will be presented for three important steelmaking processes: Oxygen steel-making, electric arc furnace steelmaking and ladle metallurgy.

TIME	DATE	LOCATION
11:30 am	November 16, 2019	Carnegie Mellon University Materials Science & Engineering Doherty Hall 2210