Curriculum Vitae of Tohru S. SUZUKI

Place and Date of Birth:

Tokyo, Japan
November 14th, 1965

EDUCATION

Dr.Eng. (Materials Science and Engineering), Waseda University, Japan, 1995
M.Eng. (Materials Science and Engineering), Waseda University, Japan, 1992
B.Eng. (Materials Science and Engineering), Waseda University, Japan, 1990

EMPLOYMENT EXPERIENCE

National Institute for Materials Science, Japan
Research Center for Functional Materials, Ceramics Processing Group
Group Leader (April 2016 – Present)

National Research Institute for Metals, Japan
Materials Processing Division
Researcher (April 1996 - March 2002)
Senior Researcher (April 2002 - March 2012)
Chief Researcher (April 2012 – March 2016)

Waseda University, Japan
Dept. of Materials Science and Engineering
Research Assistant (April 1994 - March 1996)

Field of Specialization:

- High magnetic field processing
- Control of texture in ceramics
- Colloidal processing
- Sintering of ceramics
- Superplasticity of ceramics

Awards

- Global Star Award, The Engineering Ceramics Division of The American Ceramics Society, January 2017
- CerSJ (The Ceramics Society of Japan) Awards for academic achievements in ceramic science and technology, June 2014
- Award for Outstanding Papers Published in the Journal of The Ceramic Society of Japan, June 2012
- Ceramographic Award, The Ceramics Society of Japan, March 2010
- JSPM (Japan Society of Powder and Powder Metallurgy) Award for Innovatory Research, May 2005
- JSPM (Japan Society of Powder and Powder Metallurgy) Distinguished Paper Award, May 2001
- Award for Improvement of Basic Research on Powder and Powder Metallurgy; Japan Society of Powder and Powder Metallurgy, May 1998

Research field

Control of microstructure in ceramics is one of the effective ways to improve their properties. In order to provide high performance ceramics for environment and energy technology, we focus on the microstructure control in bulk ceramics. The aim of my research is the development of the advanced processing for producing bulk ceramics.

I will develop the processing for designing the microstructure by powder dispersion, crystallographic orientation and sintering. In particular, I found that the crystallographic orientation even in diamagnetic ceramics can be controlled by a strong magnetic field, such as alumina, SiC, AlN, ZnO, piezoelectric ceramics and so on. For instance, it is expected that we improve the ionic conductivity in oxyapatite solid electrolyte with anisotropic conductivity after we can align the preferential crystal axis for ion conductivity by controlling crystalline orientation using a strong magnetic field.

We intend to design an optimized microstructure for the properties by a novel processing and prepare advanced ceramics with high functionality and reliability.