

Symposium 17: Health and Safety Aspects of Ceramic Nanoparticles

Main Organizers

- Sylvia Johnson, NASA Ames Research Center, USA
- Steve Freiman, Freiman Consulting, USA
- Gary Fischman, Future Strategy Solutions, USA
- Fumio Watari, Hokkaido University, Japan

Co-Organizers

- Lang Tran, Institute of Occupational Medicine, Scotland
- Akio Makashima, Japan Advanced Institute of Science and Technology (JAIST), Japan
- Christian Hoffman, EPCOS, Austria
- Kamal Hossain, National Physical Laboratory (NPL), UK

Oral Session

Tuesday, November 16

Room: 1203

9:00 - 11:45: Session 1

Chair: Sylvia M. Johnson (NASA Ames Research Center, USA)

9:00 - 9:30

S17-001 Biointeractive and Bioreactive Nature of Nanoparticles (President - Designated)

F. Watari; Hokkaido University, Japan

9:30 - 10:00

S17-002 Challenges and Opportunities in Commercialising Nanostructured Ceramics: An Initial Case Study (Invited)

J. Binner¹, B. Vaidhyanathan¹, C. Munnings¹, P. Rimmer²; ¹Loughborough University, UK, ²MEL Chemicals Ltd, Manchester, UK

10:00 - 10:30

S17-003 The Importance of Systemic Nanotoxicological and Toxicokinetic Analysis for Ensuring the Safety of Well-dispersed Amorphous Nanosilicas (Invited)

T. Yoshikawa^{1,2}, Y. Tsutsumi^{1,2}; ¹Osaka University, Japan, ²National Institute of Biomedical Innovation, Japan

10:30 - 10:45 Break

10:45 - 11:15

S17-004 Biomedical Applications and Toxicity of Cerium Oxide Nanoparticles – The Need for Controlled Measurements (Invited)

S. Seal¹, A. S. Karakoti¹, S. Singh¹, S. Hirst², C. Reilly², W. Self¹; ¹University of Central Florida, USA, ²Virginia Polytechnic Institute and State University, USA

11:15 - 11:45

S17-005 Current Research and Prospect for Health Effects of Nanoparticles on Offspring (Invited)

M. Umezawa, K. Takeda; Tokyo University of Science, Japan

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14:15 - 17:00: Session 2

Chair: Fumio Watari (Hokkaido University, Japan)

14:15-14:45

S17-006 Engineered Nanomaterials: Application Potential and Toxicity Issues (Invited)

S. Mathur, L. Xiao, S. Stucky, O. Arslan, D. Herrmann, B. Mueller, T. Fischer; University of Cologne, Germany

14:45 - 15:00

S17-007 Ensuring Safe Handling of Nanoscale Materials in a Research Laboratory Setting

J. Koehne¹, A. Cassell², D. Kaye¹, D. Loftus¹, M. Oye², S. Phillips¹, D. Prohaska¹, S. Sethna¹, P. Wilhite³; ¹NASA Ames Research Center, USA, ²ELORET Corp., USA, ³Santa Clara University, USA

15:00-15:15

S17-008 Microwave Hazards on Heme-proteins with Carbon Nanotubes. Thermal and Redox Chemistry

T. Nakashima, H. Horiguchi, H. Ohe, K. Kato, M. Sano; Yamagata University, Japan

15:15-15:45

S17-009 Various Effects of Fullerene and Its Derivatives on The Development and Functions in Rodent Embryos and The Adult Animals (Invited)

T. Tsuchiya; National Institute of Health Sciences, Japan

15:45 - 16:00 Panel Discussion and ICF Committee Meeting

16:00 - 16:15 Break

16:15 - 17:00 Panel Discussion and ICF Committee Meeting

Poster Session

Tuesday, November 16

Room: Event Hall

12:00 - 14:00

S17-P001 Efficient Screening of Nanotoxicity Using Vesicle and E.coli

S. Jee, S. Shin, Y. Kim; Kwangwoon University, Korea

S17-P002 Toxicity Test of Various Nanoparticles by Fluorescent-dye Contained Vesicle

H. N. Umh, S. Shin, Y. Kim; Kwangwoon University, Korea