

## Special Topics 1

### Fulrath Memorial Symposium on Advanced Ceramics

*Advanced Ceramic Science and Technologies for the Connected World.*

Prof. Richard M. Fulrath (1924-1977) of the University of California Berkley was a great pioneer of modern ceramic sciences and technologies, and played a major role in promoting good relations between the ceramics communities of the USA and Japan. To the memory of the great professor, the Richard M. Fulrath award was established in 1978 to promote technical and personal friendships between USA and Japanese professional ceramic engineers/scientists and encourage understanding among the diverse cultures of the two countries. In its 40-year history, this award has made major contributions in this area.

In celebration of the 40th-year anniversary of the Richard M. Fulrath award, this symposium will be held to address "Advanced Ceramic Science and Technologies for the Connected World." In our future society, many devices will be interconnected to improve standards of living, responding to the demands for energy, healthcare, housing and transportation. The connected world will be realized to enrich our society, and it should harmonize with the beautiful earth. Ceramic science and technology will play important roles in this pursuit. Historically, the Fulrath award winners have made significant contributions to various areas of ceramic science and technology development. This anniversary symposium will feature awardees who are addressing the critical role of advanced ceramic materials and technologies in solving various societal challenges. The technical program will cover wide ranging topics and identify key challenges and opportunities for various ceramic technologies in creating the connected world.

#### <PROPOSED SESSION TOPICS>

- Ceramic Science Fundamentals
- Environmentally friendly processing
- Environmentally benign ceramic technologies
  - Catalysts/Photo-Catalysts
  - Alternate materials to Toxic/Hazardous materials
- Electroceramic devices for IoT/IoE
  - Sensors
  - Capacitors/Inductors/Resisters
  - Devices in communication systems/Frequency controls
  - Electronic Circuit protections
- Ceramic Technologies for energy-related issues
  - Energy generation
  - Energy storage
  - Saving Energy

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