Invitation

We invite industry professionals, engineers, and researchers to join the International Symposium on Piezocomposite Applications – ISPA 2026 with focus on "Where Frontiers Meet".

ISPA is the leading international platform dedicated to piezoceramic composite technologies and their role in advancing component performance in extreme environments and mission-critical applications. The symposium brings together innovators from industry and research who are driving progress in the field, providing a space to present breakthroughs, exchange insights, and discuss how exclusive material technologies meet very demanding real-world challenges – from the deep ocean to outer space, and from micro-scale sensors to large-scale structural actuation.

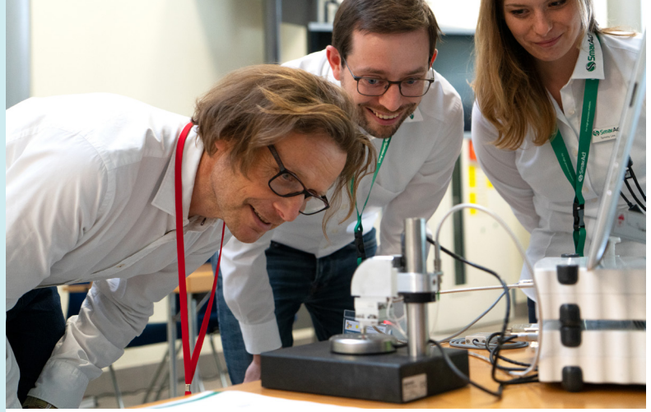
At the same time, we keep an eye on the entire value chain of piezocomposites, from piezoceramic and other piezoelectric materials, and component technologies to applications – always taking into account regulatory requirements for the production and use of materials. Recent findings in advanced characterization methods and equipment are of particular interest. In addition, ISPA 2026 discusses topics related to piezoelectric composites designed for extreme thermal, mechanical, or chemical conditions and application cases from aerospace, navy, energy, mobility, and other sectors facing frontier challenges.

ISPA takes place in Dresden, one of Germany's leading innovation hubs – and one of Europe's most beautiful cities.

ISPA is organized by Fraunhofer IKTS together with Smart Material GmbH.

Dr. Holger Neubert
Fraunhofer IKTS

Thomas Daue
Smart Material GmbH



Industrial Exhibition

You are looking for attractive opportunities to promote your company at ISPA 2026? Register as sponsor or write an e-mail to **ispa@ikts.fraunhofer.de** for a tailor-made solution. More information on **www.ikts.fraunhofer.de/en/ispa**.

- Exhibitor sponsor
- Exhibitor + give away sponsor
- Coffee break sponsor
- Logo on website + give away sponsor

Poster Session

The ISPA 2026 poster session takes place on September 17, 2026, 3:30 p.m in the exhibition area.

If you like to present a poster, please **submit your poster abstract until July 30, 2026** and register as "speaker". More information on topics and submission on our website.

Venue

Fraunhofer Institute for Ceramic technologies and Systems IKTS
Winterbergstrasse 28, 01277 Dresden, Germany

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Fees

	Early Bird (until July 30, 2026)	Late Bird
Regular	€ 500,-	€ 550,-
Speaker	€ 300,-	€ 350,-
Student	€ 300,-	€ 350,-

Please register at **www.ikts.fraunhofer.de/en/ispa2026.**

Folgen Sie uns

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Fraunhofer Institute for Ceramic Technologies and Systems IKTS

Smart Material & Piezo Applications Forum
September 16–18, 2026, Dresden, Germany

International Symposium on Piezocomposite Applications ISPA

Sponsored by

SMART MATERIAL · CTS · INNOVIA HIGH PERFORMANCE PIEZO

ISPA 2026
International Symposium on Piezocompoite Applications

Program

September 16, 2026
Industrial workshop, hosted by CTS Corporation

12:30 Registration

13:00 **Welcome, Short Introduction to CTS Products and Capabilities**
Jason Nikkel, CTS Corporation, Denmark

13:15 **Basic Concepts, Application Examples, FEM**
Erling Ringgaard, CTS Corporation, Denmark

14:00 Break in Exhibition

14:30 **Update on RoHS & Lead-Free Materials**
Jason Nikkel, CTS Corporation, Denmark

15:15 **Choice of Technology and Materials for Applications**
Erling Ringgaard, CTS Corporation, Denmark

16:00 Break in Exhibition

16:30 **Future Materials, Giant Electrostriction, Textured Lead-Free**
Erling Ringgaard nd Jason Nikkel, CTS Corporation, Denmark

17:15 **AI and Machine Learning Assisted Materials Development**
Erling Ringgaard, CTS Corporation, Denmark

17:30 **IKTS Lab Tour**

18:45 Get Together in Exhibition

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ISPA

8:00 Registration

8:30 **Welcome and ISPA Introduction**
Holger Neubert, Fraunhofer IKTS, Germany and Thomas Daue, Smart Material GmbH, Germany/USA

8:45 **Greetings**
tbd

Keynote

9:00 **The P.A.S.S. System for De-Icing of Composite Aircrafts and Drones**
John Geriguis, Advanced Development, USA

Session 1: Subsea 1

9:30 **MFC Actuators for Biomimetic UW Robotics toward Understanding Fish Swimming and Biomimetic Locomotion**
Shokoofeh Abbaszadeh, OVGU Magdeburg, Germany

10:00 **Self-Powered, Underwater Acoustic Transmitter for Fish Tracking**
Thomas Daue, Smart Material GmbH, Germany/USA

10:30 Break & Exhibition

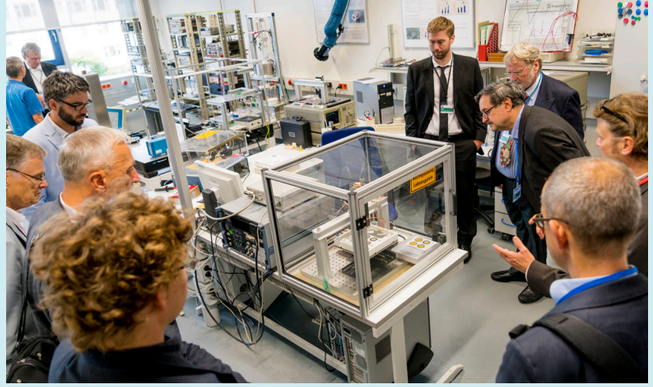
Session 2: Subsea 2

11:15 **Transition from PZT to Lead-Free Materials for SONAR Transducers**
Stephan Rautenberg, TKMS Atlas Elektronik GmbH, Germany

11:45 **The Impact on ADCP Performance from Using Lead-free Piezo Ceramic over PZT**
Christopher Grinde, Nortek, Norway

12:15 **Lead-free Sonar Transducers Prototypes Characterization for UW Acoustics**
Nicolas Josso, Thales DMS, France

12:45 Break & Exhibition



Session 3: Materials 1 (LF, Texturing, SC)

14:00 **Scaling Considerations for Additive Manufacturing of Textured Piezo-Ceramics for Acoustic Transduction**
M.A. Fanton, Pennsylvania State University, USA

14:30 **Effect of ZnO Submicron Spheres on SPS-Processed PZT Ceramics**
AKM Asif Iqbal, Saint Louis University Madrid, Spain

15:00 **Processing of [001] Fiber-Texture PMN-PZT Ceramics for PE Sensors**
Beecher H. Watson, Pennsylvania State University, USA

15:30 Break & Poster Session

Session 4: Materials 2 (Composites)

16:30 **Tailoring Electroacoustic Properties of 1-3 Piezocomposites by Chemical Modification and Texture Development**
Sedat Alkoy, STEM Ltd., Turkey

17:00 **New PCC for Focus Transducer Apps**
Ayoub Bahba, PI Ceramic GmbH, Germany

17:30 **Lead-free vs. Lead-based PET for Aerospace SHM: an Experimental Comparison under Thermal Variation**
Shankar Galiana, DLR e.V., Germany

19:30 Conference Dinner at Dresden city

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Session 5: Medical Ultrasonics and Sensors

9:00 **Single-Crystal PC as Broadband TX for Multistatic Medical Ultrasonic Imaging**
Tönnis Trittler, TU Dresden, Germany

9:30 **Lead-free Piezo Ceramic in Ultrasonic Developments**
Tanja Einhellinger-Müller, CeramTec GmbH, Germany

Session 6: Electromechanical, NDT, SHM, Future Devel.

10:00 **Textured Lead-Free Piezoceramics (Templates, ML, fibers, Composites)**
Sylvia Gebhardt, Fraunhofer IKTS, Germany

10:30 **Ultrasonic Probes for NDT Without Lead-Based Piezoceramics?**
Darvin Helfgen, SONOTEC GmbH, Germany

11:00 Break & Exhibition

11:45 **Humanoid Robotics – an Overview on Sensor- and Acoustic Challenges and Opportunities**
Holger Kunze, Fraunhofer IWU, Germany

Closing remarks

12:15 **Progress Concerning Piezoelectric 1-3 Composites**
Thomas Daue and Andreas Schönecker, Smart Material GmbH, Germany, USA

12:45 **Closing Remarks**
Holger Neubert, Fraunhofer IKTS, Germany

13:00 Break & Farewell