

Announcement and Call for Papers

50th International Annual
Conference of the Fraunhofer ICT
June 25 – 28, 2019

Convention Center,
Karlsruhe, Germany

Energetic Materials


Past, Present
and Future



Fraunhofer

ICT

50th International Annual Conference of the Fraunhofer ICT



Energetic Materials – Past, Present and Future

For 50 years the International Annual Conference of the Fraunhofer ICT has given scientists in the global energetic materials community from all over the world a forum to share and discuss their research. Some of the research goals pursued 50 years ago – such as enhanced performance and safety or low production costs – are as relevant today as they were in the past. However, new research trends have also emerged. For example, increased awareness of environmental impact and toxic effects on humans has stimulated a plethora of research into green alternatives to traditional energetic materials like lead azide.

Alongside these shifts in research objectives, the methods and materials used have also changed considerably over the years. New methods for the synthesis and processing of energetic materials, such as micro reactor technology or 3D printing of high explosives, have been developed or are the topic of current research. New systems under investigation, such as co-crystallized high explosives or metallic nano-laminates, have the potential to create energetic materials with a performance tailored to specific applications. Together with new or improved experimental techniques such as high-speed video, fast spectrometry or transient interferometry methods like photonic doppler velocimetry, new computer models and simulation capabilities have enabled scientists to design energetic materials with enhanced capabilities and efficiency in technical applications, and to increase their knowledge and understanding of energetic materials in ways barely imaginable 50 years ago. It will be exciting to see what the future holds for us.

From synthesis and processing, modelling and simulation through to experimental characterization and from basic research through to technical applications, the 50th International Annual Conference of the Fraunhofer ICT will continue to welcome contributions relating to almost all aspects of energetic materials research.

Scientists participating in ICT's 50th International Annual Conference have the opportunity to present and discuss their research with experts from all over the world, to stay up to date with the latest trends and ideas in the energetic materials community and to contribute to the future of the science of energetic materials.

Chairman of the conference
Sebastian Wurster
Fraunhofer ICT, Pfinztal, Germany

Announcement and Call for Papers

The Fraunhofer Institute for Chemical Technology is holding its 50th International Annual Conference on:

Energetic Materials – Past, Present and Future

Main topics

- New energetic materials
- Synthesis and processing
- Modelling and simulation
- Experimental characterization
- Technical applications

Presentation

Contributions to the conference can take the form of oral presentations (presentation time 20 minutes including discussion) or posters. Please submit an extended abstract not exceeding 500 words with optional figures and tables together with the exact title and name of the author(s). The papers will be published in the Conference Proceedings which will be available at the beginning of the event. Guidelines on how to prepare the text for publication will be sent to the authors.

Conference language

English

Deadlines

Abstracts (to manuela.wolff@ict.fraunhofer.de)	December 20, 2018
Reply to authors	February/March 2019
Full papers	April 2019

The program will be published in April 2019.



The Fraunhofer Institute for Chemical Technology ICT

The Fraunhofer ICT in Germany is a unique research and development facility with competence in the fields of energetic materials, energetic systems, polymer engineering, applied electrochemistry and environmental engineering. It comprises the entire spectrum from basic research tasks to application in products according to its customers' needs. In the field of propellants and explosives the Fraunhofer ICT, with its 500 employees, is the only research institute in Germany to perform contractual research for the Federal Ministry of Defence, the national and international defence industry as well as commercial clients. Founded in 1959, the Fraunhofer ICT has gained an international reputation, especially in the fields of:

- Material and processing technology
 - Formulation, characterization and manufacturing of energetic and polymeric materials
 - Mechanical and chemical processing technology
 - Substance and material properties and structure analysis
- Combustion, reaction kinetics
 - Physical and chemical analysis of combustion and detonation phenomena
 - Energy balance and conversion
 - Sensor technology
- Environmental and safety engineering
 - Gas explosions and hazards
 - Environmental testing
 - Waste disposal and recycling



Conference Management

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