

Announcement and Call for Papers

49th International Annual
Conference of the Fraunhofer ICT
June 26 – 29, 2018

Convention Center,
Karlsruhe, Germany

Energetic Materials

Synthesis,
Processing,
Performance



Fraunhofer

ICT

49th International Annual Conference of the Fraunhofer ICT

International Annual Conferences of the Fraunhofer ICT...

... with a different emphasis each year, cover scientific and technological progress in the entire field of energetic materials and the related disciplines. Held annually for over 40 years, the conferences have gained worldwide importance, with hundreds of participants from more than 30 nations each year. The conferences are held in Karlsruhe's Convention Center, one hour south of Frankfurt International Airport.

Energetic Materials – Synthesis, Processing, Performance

The research and development of new energetic materials and formulations for ammunitions, propellants and pyrotechnics is an ongoing process worldwide. Energetic materials must meet a variety of requirements, some of which may be contradictory. Requirements relate primarily to the performance, but insensitivity, stability and vulnerability also play an important role. However, new perspectives have recently emerged in this field. Increasing awareness of the risks that toxic compounds pose to humans and the environment has led to the banning of hazardous materials, and stimulated the search for non-critical substitute components. Other new perspectives include synthesis and processing methods that are environmentally friendly or give access to new materials such as co-crystals, nanocomposites, energetic ionic liquids and 3D energetic metal-organic frameworks. The new energetic ingredients, and advanced production technologies such as the additive manufacturing of energetic materials, may lead to new, innovative applications and the enhanced performance of existing products.

The 49th International Annual Conference of the Fraunhofer ICT will welcome contributions relating to new energetic materials, non-hazardous synthesis and processing techniques, particle technology, binders and bonding agents, formulations and characterization. In addition, associated applications in propellants, high explosives and pyrotechnics will be highlighted.

The objective of the 49th International Annual Conference of the Fraunhofer ICT will be knowledge exchange on basic research, technical implementation, political requirements and industrial use, in order to promote the forward-looking development, production and application of energetic materials related to defense technology, pyrotechnic devices and space propulsion.

Chairman of the Conference

Dr. Uwe Schaller

Fraunhofer ICT, Pfinztal, Germany

Announcement and Call for Papers

The Fraunhofer Institute for Chemical Technology is holding its 49th International Annual Conference on:

Energetic Materials – Reactivity and Modelling

Main topics

- Design and modelling of new, high-energy-density materials (HEDM)
- Synthesis of energetic materials and components for high explosives, propellants and pyrotechnics
- Replacement of hazardous materials and processes with benign alternatives
- New characterization methods and processing tools for energetic formulations and ingredients
- Physical and chemical analysis of combustion and detonation phenomena
- Performance of ammunitions, propellants, pyrotechnics and gas generators
- Novel application of energetic materials

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, 2017
Reply to authors	February 2018
Full papers	April 2018

The program will be published in April 2018.



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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