

Announcement and Call for Papers

48th International Annual
Conference of the Fraunhofer ICT
June 27 – 30, 2017

Convention Center,
Karlsruhe, Germany

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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Energetic Materials Reactivity and Modelling

48th 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 modern Convention Center, one hour south of Frankfurt International Airport.

Energetic Materials – Reactivity and Modelling

The quality of all energetic systems and applications is based on an accurate and predictable sequence of the reaction chain. Small alterations of material properties, production process parameters or environmental influences affect the proper interaction of ignition and combustion or initiation and detonation. Furthermore, new regulations require the development of REACH compatible energetic substitutes and green materials for military, space and civil applications with comparable performance to current systems. But also minor modifications of the chemical compositions may alter the functionality of the total system. To foresee and overcome such problems a fundamental understanding of the total reaction process assisted by experimental characterization and theoretical investigations of all chemical and physical components and phenomena is indispensable.

Modern measuring techniques and test methods provide a deep insight into the structure and quality of energetic substances and composition and allow the investigation of fast high temperature reactions of propellants, explosives and pyrotechnics. New chemical and physical models combined with actual computer techniques offer the possibility to simulate the transient ignition and combustion mechanism of even strongly heterogeneous pyrotechnic materials and their effect in use.

Objective of the 48th International Annual Conference of the Fraunhofer ICT will be the knowledge exchange on basic research, technical implementation, political requirements and industrial usage in respect of the forward-looking development, production and application of energetic materials related to defense technology, pyrotechnic devices and space propulsion.

Chairman of the Conference

Volker Weiser
Fraunhofer ICT, Pfinztal, Germany

Announcement and Call for Papers

The Fraunhofer Institute for Chemical Technology is holding its 48th International Annual Conference on:

Energetic Materials – Reactivity and Modelling

Main topics

- Ignition and combustion of energetic materials for military, space and civil use
- Initiation and detonation processes
- Reaction of thermites and metals
- Modelling and simulation issues on propellants and pyrotechnics
- Production, characterization and testing of REACH compatible and green 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)

Reply to authors

Full papers

The program will be published in April 2017.

December 20, 2016

February 2017

April 2017