

# Energetic Materials – Analysis, Characterization, Modelling

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**52<sup>nd</sup> International Annual Conference  
of the Fraunhofer ICT**

**June 27-30, 2023**

**Convention Center, Gartenhalle  
Karlsruhe, Germany**

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 50 years, the conferences have gained worldwide importance, with hundreds of participants from more than 30 nations each year.

### **Energetic Materials – Analysis, Characterization, Modelling**

Research into energetic materials is more relevant than ever and has been the focus of the ICT Annual Conference for more than 50 years. New research results, developments, applications and trends in the field of energetic materials have continually been presented, discussed and debated by the international research community. Many long-standing research goals are still relevant, such as increased performance and safety. However, there are also new aspects such as reducing the environmental and health hazards of the energetic materials and the resulting reaction products. In addition to the synthesis and production of new, high-performance energetic materials and additive manufacturing, these goals and requirements lead to the development of new and advanced methods in analysis, characterization and modelling. The spectrum ranges from online measurement techniques, and fast spectroscopic methods, through to analytical or even complex numerical models and simulations. The overall aim is to gain a better understanding of the processes and materials being investigated and to identify the factors influencing their behavior, allowing performance predictions or the development of new applications.

The 52<sup>nd</sup> International ICT Annual Conference invites scientists, engineers and everyone who works with, develops and applies energetic materials to present their ideas, developments and results, to stimulate fruitful discussions leading to improvements and new developments of materials, methods and models.

Chairman of the Conference  
Sebastian Knapp  
Fraunhofer ICT, Pfinztal, Germany

# Announcement and Call for Papers

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The Fraunhofer Institute for Chemical Technology is holding its 52<sup>nd</sup> International Annual Conference on:

## **Energetic Materials – Analysis, Characterization, Modelling**

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### **Main topics**

- Modelling and Simulation
- Synthesis of energetic materials and components
- Understanding combustion and detonation phenomena
- New characterisation and experimental methods
- Prediction and tailoring of system behaviour
- New applications 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**

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|--|---------------|
| Abstracts (to <a href="mailto:manuela.wolff@ict.fraunhofer.de">manuela.wolff@ict.fraunhofer.de</a> ) | Dec. 16, 2022 |
| Reply to authors   | March 2023    |
| Full papers  | April 2023    |

The program will be published in April 2023.

## The Fraunhofer Institute for Chemical Technology ICT

The Fraunhofer ICT with its 500 employees is the only German research institution working on the entire development chain, ranging from raw energetic material synthesis through to the development and evaluation of energetic prototype systems. The research is focused on the synthesis, development, characterization, simulation, modeling, formulation and manufacturing of rocket propellants, gun propellants, explosives, gas generators and pyrotechnics.

Fraunhofer ICT helps to ensure the strong analysis and decision-making capabilities of the German Federal Ministry of Defence (BMVg), and supports industrial R&D activities in Germany and Europe. The key to successful research and the development of improved energetic materials and systems is the long-standing competence of the institute's employees.

Today, Fraunhofer ICT carries out R & D on the performance, insensitivity, functionality, safety and environmental compatibility of new, tailor-made propellant and explosive systems.

## Conference Management

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