JUSTUS-LIEBIG-UNIVERSITÄT GIESSEN

Experimental Physics I
I. Physikalisches Institut

EUROPEAN UNION:
Investing in our Future
European Regional Development Fund

HESSEN
Hessisches Ministerium für Wissenschaft und Kunst

INNOVATION LAB
IN LAB
HIGH-PERFORMANCE MATERIALS

C12A7:2e– ELECTRIDE WORKSHOP

fabrication, characterization and application in space

4th-5th October 2022 — Giessen

OCTOBER
4th

C12A7:2e− ELECTRIDE FABRICATION AND CHARACTERIZATION

Until 13:30	*Arrival*
13:30 – 14:15	*Lunch*
14:15	**Welcome** *P. J. Klar,* *Justus Liebig University of Giessen*
14:20	**Synthesis of poly- and single-crystalline C12A7-oxide and -electride** *S. Ebbinghaus,* *Martin Luther University Halle-Wittenberg*
14:50	**Mayenite Electride C12A7:2e− characterization & recent developments at MLU** *N. Kotschote,* *Martin Luther University Halle-Wittenberg*
15:20	**Improved electronic, thermal and mechanical properties of C12A7:e− coatings and ceramics** *K. Wätzig,* *Fraunhofer Institut für Keramische Technologien und Systeme Dresden*
15:50 – 16:10	*Coffee Break*
16:10	**Emission property measurements within the iFACT project** *G. Kottke,* *Airbus Defence and Space Immenstaad*
16:40	**Reliable determination of the effective electron concentration in Mayenite-based electrides** *M. Elm,* *Justus Liebig University of Giessen*
17:10 – 18:00	*Lab Tour Material Characterization*
From 18:30	*Joint Dinner for invited guests*

OCTOBER
5th

APPLICATION OF C12A7:2e– ELECTRIDE IN SPACE

9:00	**Progress status of C12A7:e– based devices: 8 years of lessons learnt** *A. Post,* *Advanced Thermal Devices*
9:30	**C12A7 characterization and cathode development** *J.P. Wulfkühler,* *Technical University of Dresden*
10:00	**First steps in C12A7 cathode development** *P. Becke,* *Airbus Defence and Space Immenstaad*
10:30	**Development of a C12A7:2e– compatible hollow cathode** *D. Zschätzsch,* *Justus Liebig University of Giessen*
11:00	**Neutralizer Design with a flat C12A7:2e– insert** *M. Reitemeyer,* *Justus Liebig University of Giessen*
11:30	**Ariane Group view on the industial chances and challenges of C12A7 electride based neutralizers** *C. Altmann,* *ArianeGroup*
12:00 – 12:30	*Lunch*
12:30 – 14:00	*Lab Tour Electric Propulsion*

VENUE

Lecture Hall IV, Heinrich-Buff-Ring 14, 35392 Giessen, Germany

ARRIVAL BY PUBLIC TRANSPORT

The building is located on the natural science campus "Seltersberg" within walking distance (1.7 km, 20 minutes) from Giessen central railway station and the hotels. You can also take bus line no. 10 (stop „Naturwissenschaften", every 30 minutes). A taxi stand is directly in front of the main railway building.

ARRIVAL BY CAR

Leave the motorway at „Schiffenberger Tal" or „Uni-Klinikum / Bergwerkswald". There is a public parking lot directly at the venue.