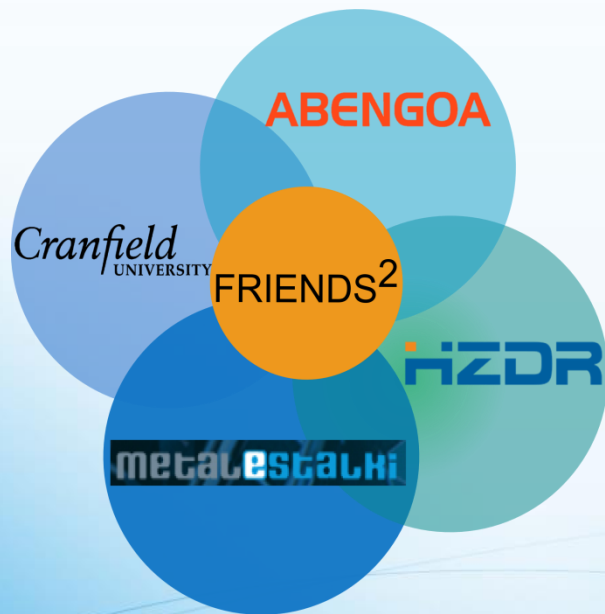


FRamework of Innovation for Engineering of New Durable Solar Surfaces (FRIENDS²)



**Advanced coating and characterization
techniques**

Workshop, September 19th – 20th, 2016

**Helmholtz-Zentrum Dresden-Rossendorf,
Germany**



Information for participants

- ❑ Chair persons: Sibylle Gemming (Dresden, Chemnitz), Matthias Krause (Dresden)
- ❑ Scope: Introduction in "Advanced coating and characterization techniques" by tutorials and hands-on training
- ❑ Target group: Consortium members of EU-RISE-project FRIENDS², interested PhD students, scientists, and engineers
- ❑ Participation: Free of charge, at maximum 20 participants
- ❑ Time & location: Mon, 19th and Tue, 20th September 2016, Helmholtz-Zentrum Dresden-Rossendorf (HZDR), Bautzner Landstraße 400, 01328 Dresden, Germany
- ❑ Culinary: Free refreshments and Monday evening dinner, possibility for lunch in the canteen of the HZDR
- ❑ Contact/
Registration: Dr. Matthias Krause, Helmholtz-Zentrum Dresden-Rossendorf, 01314 Dresden, phone: +49 351 2603578, email: matthias.krause@hzdr.de

Program, Monday, September 19th, 2016

8:30 - 9:00	Welcome
9:00 - 10:00	D. Rafaja, TU BA Freiberg, Combining X-ray and TEM techniques for microstructure studies on thin films nanocomposites
10:00 - 10:30	Coffee break
10:30 - 11:30	R. Heller, F. Munnik, HZDR, From hydrogen to heavy elements - depth resolved compositional analysis of materials by ion beam techniques
11:30 - 12:30	F. Lungwitz, E. Schumann, HZDR, UV-Vis-NIR spectroscopic ellipsometry and spectrophotometry of thin films
12:30 - 14:00	Lunch and coffee
14:00 – 17:00	Experiments - 1
17:00 – 17:15	Closing remarks
19:30 - 22:00	Dinner in the city center

Program, Tuesday, September 20th, 2016

8:30 - 9:30	M. Krause, HZDR, From micro to nano - Fundamentals and recent developments of Raman spectroscopy
09:30 - 10:00	Coffee break
10:00 - 11:00	J. Grenzer, HZDR, Advanced X-Ray analysis of thin films
11:00 - 12:00	B. Szyszka, TU Berlin, Overview on recent development on coating technologies for solar applications
12:00 - 13:30	Lunch break and coffee
13:30 - 16:30	Experiments – 2
16:30 - 17:00	Final discussion and closing remarks
17:00	Departure



Experiments and lab tour

Method/ Experiment	Group 1	Group 2	Group 3	Group 4	Group 5	Supervisor
Rutherford Backscattering (RBS), channeling RBS (c-RBS)	Mon, 14:00 – 17:00		Tue 13:30 – 16:30			R. Heller
Ellipsometry and Reflectometry (SE+R)		Mon, 14:00 – 17:00		Tue 13:30 – 16:30		E. Schumann, F. Lungwitz
micro-Raman	Tue, 13:30 – 16:30		Mon, 14:00 – 17:00			M. Krause
in situ Raman, cluster tool		Tue, 13:30 – 16:30		Mon, 14:00 – 17:00		A. Schneider, D. Janke
X-Ray Diffraction					Mon, 14:00 – 17:00 AND Tue, 13:30 – 16:30	J. Grenzer
Lab tour - PVD chambers	Mon, during RBS, c-RBS	Monday, during SE+R	Tue, during RBS, c-RBS	Tue, during SE+R	Mon or Tue	M. Mesko