

76. BHT - FREIBERGER UNIVERSITÄTSFORUM 2025 –  
AKITA-TUBAF PARTNERSHIP KOLLOQUIUM  
INNOVATIVE APPROACHES IN MATERIALS AND ENERGY

**Datum:**

4. Juni | June 4th

**Konferenzort:**

Hybrid  
SPQ-1301  
Prüferstraße 4 | 09500 Freiberg

**Konferenzsprache:**

Englisch | English

**Leitung:**

Prof. Jens Kortus  
Vice Dean Faculty of  
Chemistry, Physics and  
Biosciences

Prof. Mitsutoshi Jikei, PhD.,  
Dean of Faculty of  
Engineering Science, Akita  
University

**Kontakt:**

TU Bergakademie Freiberg  
Graduierten- und Forschungsakademie  
Prüferstraße 2 09599  
Freiberg  
Telefon +49 3731 39-2697  
[bht@grafa.tu-freiberg.de](mailto:bht@grafa.tu-freiberg.de)

**Mittwoch, 4. Juni 2025**

| TUBAF time               | AKITA time               | ANKUNFT                                                                                                                                                                     |
|--------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9.00 - 9.30 Uhr          | 16.00 - 16.30 Uhr        | <b>Welcome</b><br>Chairpersons of both AKITA und TUBAF University                                                                                                           |
| 9.30 - 9.45 Uhr          | 16.30 - 16.45 Uhr        | <b>Dynamic chain reaction analysis of cable-stayed bridges considering cable corrosion</b><br>Asst. Prof. Yukari Aoki (hybrid)                                              |
| 9.45 - 10.00 Uhr         | 16.45 - 17.00 Uhr        | <b>Corrosion monitoring</b><br>Prof. L. Krüger, Dr Mandel                                                                                                                   |
| <b>10.00 - 10.30 Uhr</b> | <b>17.00 - 17.30 Uhr</b> | <b>PAUSE</b>                                                                                                                                                                |
| 10.30 - 10.45 Uhr        | 17.30 - 17.45 Uhr        | <b>Design of reaction environment for efficient hydrogen evolution from aqueous cellulose/TiO<sub>2</sub> suspension under light-irradiation</b><br>Asst. Prof. Kanji Saito |
| 10.45 - 11.00 Uhr        | 17.45 - 18.00 Uhr        | <b>Investigations of coupled bio-electrochemical systems - brewery wastewater treatment on a pilot scale</b><br>Prof. Bräuer, Dr. Haseneder                                 |
| 11.00 - 11.15 Uhr        | 18.00 - 18.15 Uhr        | <b>Production of carbon material and its electrochemical activity for water electrolysis</b><br>Assoc. Prof. Hiroki Takahashi                                               |
| 11.15- 11.30 Uhr         | 18.15 - 18.30 Uhr        | <b>Vortrag</b><br>Referent                                                                                                                                                  |
| 11.30- 11.45 Uhr         | 18.30 - 18.45 Uhr        | <b>Application of Machine Learning Techniques to Geochemical Classification of Accessory Minerals</b><br>Asst. Prof. Keita Itano                                            |
| 11.45 - 12.00 Uhr        | 18.45 - 19.00 Uhr        | <b>Energy as critical driver of biogeochemical turnover: using machine learning to explore energetic diversity of organic substances</b><br>Prof. Maximilian Lau            |

76. BHT - FREIBERGER UNIVERSITÄTSFORUM 2025 –  
AKITA-TUBAF PARTNERSHIP KOLLOQUIUM  
INNOVATIVE APPROACHES IN MATERIALS AND ENERGY

|                   |                   |                                                                                                                                                                                                                   |
|-------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12.00 - 13.00 Uhr | 19.00 - 20.00 Uhr | <b>MITTAGSPAUSE</b>                                                                                                                                                                                               |
| 13.00 - 13.15 Uhr | 20.00 - 20.15 Uhr | <b>Development and fabrication of high-functional Multiferroic BiFeO<sub>3</sub>-based thin films with high quality and application to low power consumption magnetic devices</b><br>Asst. Prof. Satoru Yoshimura |
| 13.15 - 13.30 Uhr | 20.15 - 20.30 Uhr | <b>Probing the orientation and local thermal conductivity of single- and multidomain ferroelastic variants in BiFeO<sub>3</sub> by Raman spectroscopy</b><br>Prof. Jens Kortus, Dr Cameliu Constantin Himcinschi  |
| 13.30 - 13.45 Uhr | 20.30 - 20.45 Uhr | <b>Atomic layer processing for electronic devices</b><br>Prof. Johannes Heitmann                                                                                                                                  |
| 13.45 - 14.00 Uhr | 20.45 - 21.00 Uhr | <b>Characterisation of thin films and development of thin film technologies</b><br>Prof. Dr David Rafaja                                                                                                          |
| 14.00 - 14.30 Uhr | 21.00 - 21.30 Uhr | <b>Final remarks and comments TUBAF and AKITA University</b>                                                                                                                                                      |
| 14.30 - 15.00 Uhr | 21.30 - 22.00 Uhr | <b>KAFFEPAUSE</b>                                                                                                                                                                                                 |
| Ab 15.00 Uhr      | Ab 22.00 Uhr      | Abschlussdiskussion                                                                                                                                                                                               |