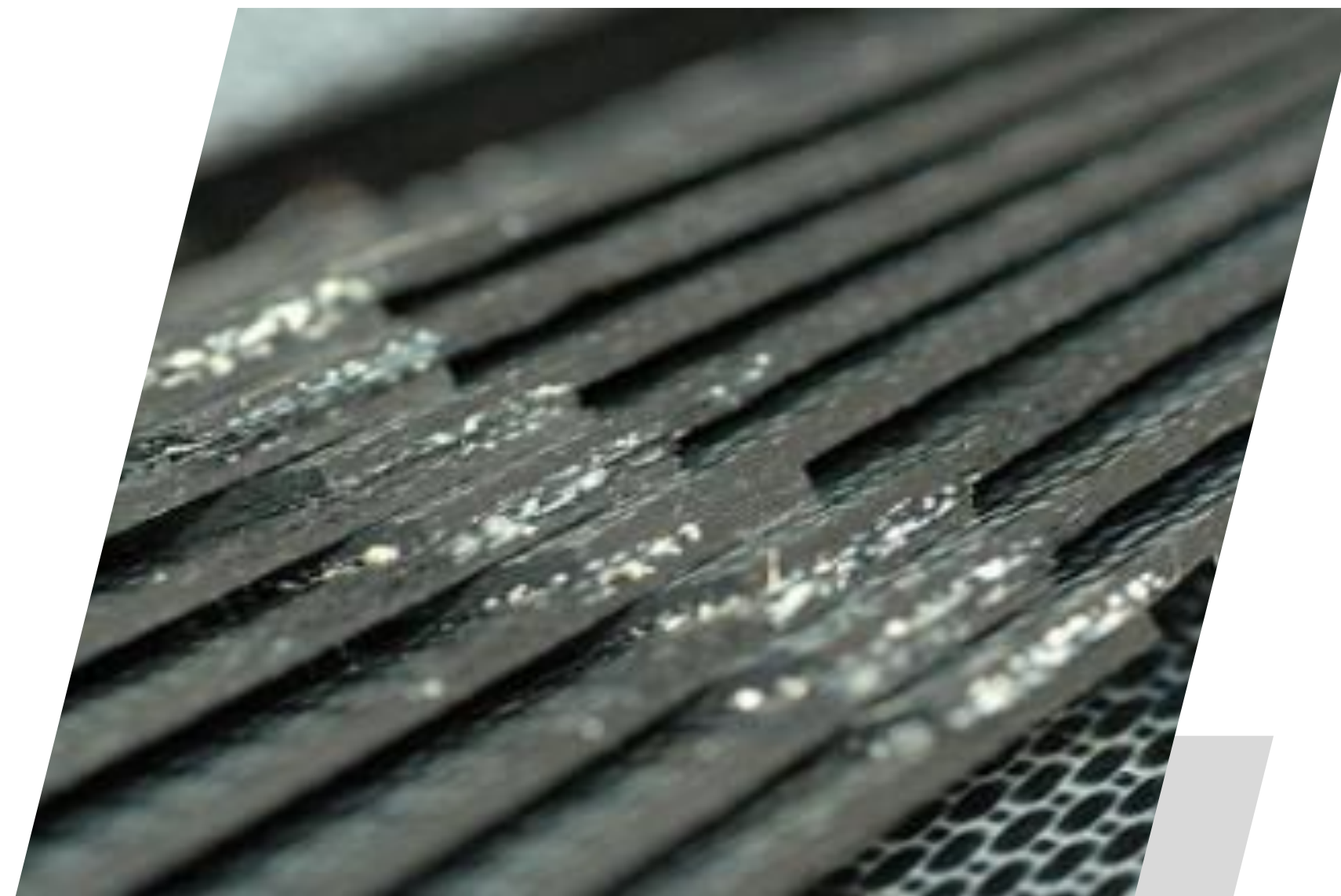


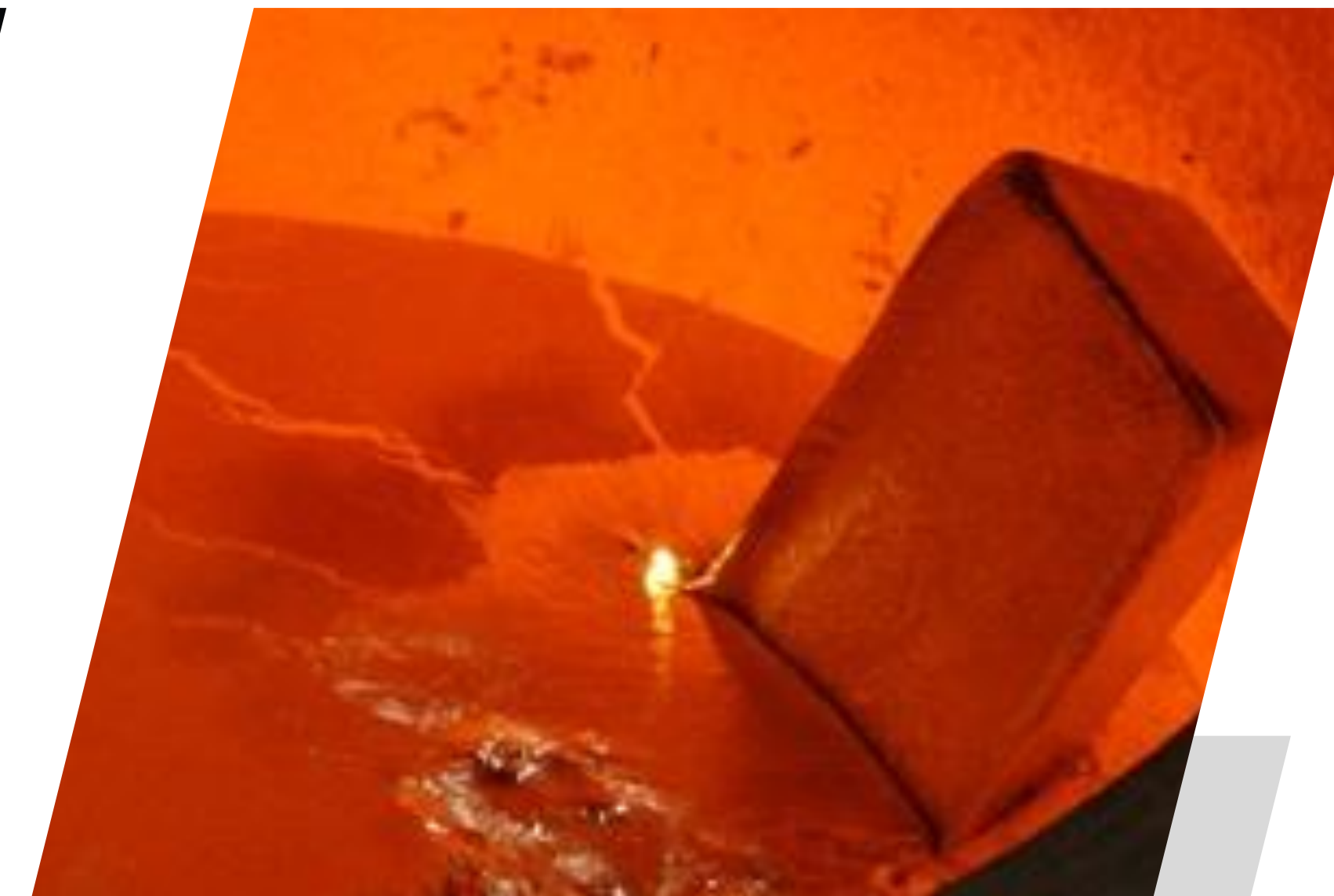
Fields of Competence



**Adhesive Bonding and
Mechanical Joining**



**Welding and Beam
Technology**



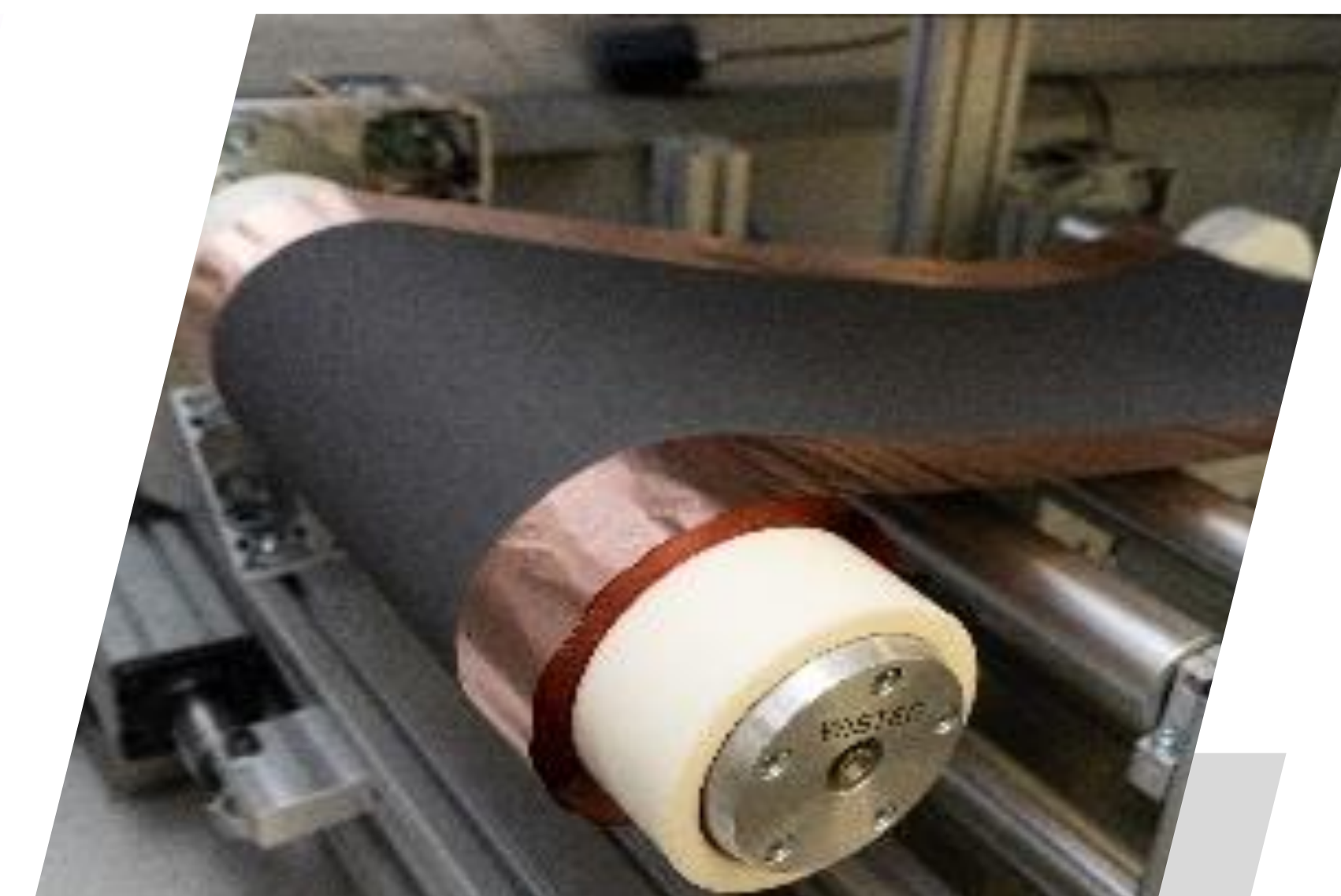
**Light-Metal
Die Casting**



**Advanced Composites
and Interfaces**



**Strength and
Component Behavior**



**Composite Technologies
and Electric Mobility**

Core Research Areas

- Structural or semi-structural bonding
- Pre-treatment and artificial aging
- Hybrid joining

- Gas Metal Arc Welding (GMAW)
- Gas Tungsten Arc Welding (GTAW)
- Additive manufacturing (DED-Arc)

- Electron beam and laser welding
- Laser vacuum welding

- Joining of aluminum die-cast
- Mold technologies
- Energy balance and digitalization of die-cast processes

- Joining and processing of lightweight structures
- Properties of hybrid materials
- Circular economy

- Residual stress analysis
- Fatigue testing
- Material strength concepts

- CFRP process chain
- Packaging and contacting for battery production

- Material analysis
- Failure analysis

Kontakt

Univ.-Prof. Dr.-Ing. Klaus Dilger
Institut für Füge- und
Schweißtechnik
Langer Kamp 8
38106 Braunschweig
Tel.: +49 (0) 531 / 391-95501
E-Mail: k.dilger@tu-braunschweig.de

Affiliated Research Centers



BATTERY
LABFACTORY
BRAUNSCHWEIG

