



Contribution ID: 2

Type: **oral**

Vacuum arc plasma in devices. Modeling and experiments

Monday, 20 March 2017 11:00 (45 minutes)

We will present overview of plasma modeling and experiments related to vacuum arc devices. The character of the plasma flow depending on the anode geometries relatively to the expanding plasma jet will be analyzed. Specifics of the high-current vacuum arc will be examined including several effects associated with high-current arc behavior in a magnetic field and transition from diffusion to constricted arc. Specifically we will address phenomena relevant for vacuum arc circuit breakers such as behavior of the vacuum arc in a magnetic field, V-shape of the arc voltage in an axial magnetic field, near anode phenomena etc. In addition we will discuss breakdown process in the case of a micro-vacuum arc device. This includes effects of insulator material, cathode material deposition and cyclic nature of insulation of the inter electrode layer.

Type of contribution

Oral

session

Applications - materials and devices

Primary author: KEIDAR, Michael (George washington University)

Co-author: Prof. BEILIS, Isak (Tel Aviv University)

Presenter: KEIDAR, Michael (George washington University)

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