

Technical Committee on Dielectrics and Electrical Insulating Materials

1. Objective

This technical committee (TC-DEI) purposes to set up a forum for technical discussion on all dielectric (insulating) materials, i.e. gases, liquids, and solids, ranging from ultra-thin layer (e.g., silicon oxide thin layer) to insulating materials used in 1000-kV power transmission systems, as well as systems comprising these materials. TC-DEI also aims to contribute to the development and diffusion of these technologies.

2. Fields of activity

All dielectric (insulating) materials and systems comprising the aforementioned materials—gases, liquids, and solids, ranging from ultra-thin layer (e.g., silicon oxide thin layer) to insulating materials used in 1000-kV power transmission systems have been considered.

3. Activity content

TC-DEI meeting is held three to four times a year. The executive committee meeting of TC-DEI is held from time to time. Technical Meetings are held eight to ten times a year. As of August 1, 2021, five investigating R&D committees and one joint research committee were active. In addition, the committee has convened Symposium on Electrical and Electronic Insulating Materials and Applications in Systems once a year as a domestic forum for in-depth technical discussion, as well as an international edition of this symposium, International Symposium on Electrical Insulating Materials (ISEIM) approximately once every three years.

4. Introduction of activities

TC-DEI holds not only Technical Meetings but also annual Symposiums on Electrical and Electronic Insulating Materials and Applications in Systems, as forums for in-depth technical discussions. In the symposium, TC-DEI honors those who have contributed to the field of dielectrics and electrical insulation for many years, and these individuals deliver commemorative lectures. Moreover, TC-DEI holds several groundbreaking sessions; Mutual-Visiting-type Poster session (MVP session) aiming at enhancing the presentation and question-answering skills of young attendees (mainly students) and deepening exchanges between them; Sun-Shine session (SS session) offering opportunities to promote the latest corporate developments for students and university instructors as well as other participants; and demonstration sessions providing demonstrations of actual measurement and diagnostic equipment as the advanced session of SS session. The International Conference on Condition Monitoring and Diagnosis 2022 (CMD2022) focusing on diagnostic techniques for power transmission and distribution facilities, will be held in Kita Kyushu in November, 2022.

5. Committee members

Position	Name	Affiliation
Chairperson	Toshihiro Takahashi	Central Research Institute of Electric Power Industry
Primary member	Masaaki Ikeda	Nuclear Regulation Authority
"	Katsumi Uchida	Chubu Electric Power Co., Inc.
"	Shigemitsu Okabe	Japan Science and Technology Agency
"	Yuji Ogawa	Meidensha Corporation
"	Naoya Kishi	Zeon Corporation
"	Jumpei Kusakawa	Hitachi, Ltd.
"	Takanori Kondo	NGK Insulators, Ltd.
"	Yutaka Suzuki	Furukawa Electric Co., Ltd.
"	Toshikatsu Tanaka	Waseda University
"	Takao Tsurimoto	Mitsubishi Electric Corporation
"	Takuya Tomizawa	Fujikura Dia Cable, Ltd.
"	Yoshiaki Nakamura	Hitachi Metals, Ltd.
"	Naoki Hayakawa	Nagoya University
"	Yoshihiko Hirano	Toshiba Infrastructure Systems & Solutions Corporation
"	Michitomo Fujita	SWCC Showa Cable Systems Co., Ltd.
"	Naohiro Hozumi	Toyohashi University of Technology
"	Noriaki Matsumura	Nissin Electric Co., Ltd.
"	Hironori Yanase	Fuji Electric Co., Ltd.
Secondary member	Takahiro Imai	Toshiba Infrastructure Systems & Solutions Corporation
"	Keizo Kato	Niigata University
"	Takashi Kurihara	Central Research Institute of Electric Power Industry
"	Masahiro Kozako	Kyushu Institute of Technology
"	Yasuhiro Tanaka	Tokyo City University
"	Satoshi Matsumoto	Shibaura Institute of Technology
Secretary	Yoitsu Sekiguchi	Sumitomo Electric Industries, Ltd.
"	Hiroaki Miyake	Tokyo City University
Assistant secretary	Yuji Hayase	Fuji Electric Co., Ltd.
"	Yoshinobu Murakami	Toyohashi University of Technology

(October 31st, 2021)

6. Investigating R&D Committees

- Investigating R&D Committee on Applications of Quantum Chemical Computation in the Field of Electrical, Electronic and Insulating Material
- Investigating R&D Committee on Power module Insulation and Evaluation technologies
- Investigating R&D Committee on Advancing Tailor-made Composite Insulation Materials and Their Applications
- Investigating R&D Committee on Advanced Nanomaterials, Organic Device Development, and Life Science Application for Supporting Sustainable Growth
- Investigating R&D Committee on Precursor Phenomena in Electrical Breakdown in Electrical Power Apparatus and Equipment and Sensing Technologies
- Cooperative Research Committee on Establish EINA Magazine-Issued IV