

between the wires. The high field strength may cause insulating failures. One of the typical failures in caused by ionic migration from the wire on the board. Systematic studies on the insulating failure due to the ionic migration, however, were not conducted sufficiently.

From these points of view, the committee has started from April 1993 and closed in March 1996. During 3 year's activities, we have held 19 times of the study meetings, and more than 90 reports were surveyed to obtain the informations mainly on the characteristics, mechanism and prevention of the ionic migration. Based on the studies and discussions in the meetings, the committee will publish soon the technical report. The contents of the report will be as follows.

1. Preface.
2. Background.
3. Terms.
4. Test method for insulation reliability of circuit board.
5. Characterization and Evaluation of test results.
6. Mechanisms and characteristics of ionic migration.
7. Relation between dielectric or insulating characteristics and deterioration of circuit board.
8. Afterward.

Digest Report on the Investigation Committee of Electrical and Optical Properties of Molecular Films and Characterization Methods of the Films

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The purpose of this investigation committee is to review the electrical and optical properties of highly-ordered molecular films, the technology used for the characterization of the films, and the present status of molecular electronics and the future prospect. The main subjects of investigation are as follows:

- 1) Electrical and optical properties of molecular films, in particular, the films whose thickness is less than 10 nm.
- 2) Preparation method of molecular films and manipulation technology.
- 3) Molecular electronics and Nano-Molecular technology.
- 4) Topics in the fields of organic ultra thin film and molecular electronics.

Since the start of this investigation committee in October, 1993, we have hold 6 study meetings every year. We have discussed our mutual interests on molecular films and the characterization methods of molecular films. During the last three study meetings, we took lectures given by non-members of this investigation committee. The three-year activity of this committee will be published in Technical Report of IEEJ.