

JMTC and JNC conclude a licensing agreement of double-decker silsesquioxane for low-dielectric, highly heat-resistant resin

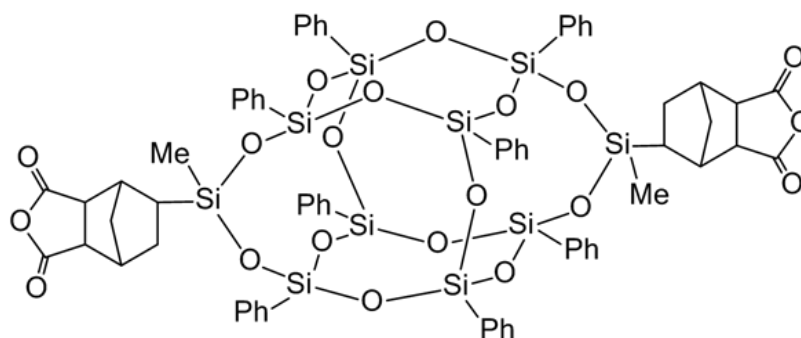
Japan Material Technologies Corporation (JMTC; Head Office: Chuo-ku, Tokyo; CEO: Koyu Urata) is pleased to announce that JMTC has concluded a licensing agreement of bifunctional double-decker silsesquioxane (hereinafter referred to as “the monomer”) for low-dielectric, highly heat-resistant resin with JNC Corporation (JNC; Head Office: Chiyoda-ku, Tokyo; CEO & President Keizo Yamada).

The monomer of this licensing agreement is bifunctional double-decker silsesquioxane developed by JNC. Silsesquioxane is a silicon compound with excellent characteristics such as low dielectric property and high heat resistance. In particular, double-decker silsesquioxane has a bulky and rigid structure, which is expected to be applied to polymers with higher heat resistance and mechanical properties.

Synthesis of silsesquioxane is technically difficult and resin additive or polymers that contain silsesquioxane structure in its side chain are available on the market as silsesquioxane derivatives. But these products do not exhibit true characteristics of silsesquioxane structure. Since the monomer is bifunctional, silsesquioxane can be polymerised in the main chain, which is expected to lead to the development of lower-dielectric, higher heat-resistant polyimide resin and epoxy resin.

By supplying the monomer to mainly polyimide resin manufacturers and epoxy resin manufactures due to licensing of the monomer by JNC, JMTC aims to contribute to the development of new low-dielectric, high heat-resistant resin to be used in the display area and optoelectronics area.

<Examples of the monomer>



JMTC has been promoting the introduction of BNFO negative thermal expansion material and high heat-resistant epoxy synthesis catalyst and is actively engaged in commercialization of functional materials for thermal management which is a large issue in the electronics area. As needs for thermal management such as low dielectric property, low linear thermal expansion and high heat resistance drastically increase and diversify with 5G (fifth-generation mobile communication system) soon to start, JMTC aims to contribute to the innovation of electronics products by advancing industrialization of innovative thermal management materials.

JMTC is a fabless startup company specializing in the field of materials such as organic materials, inorganic materials and biochemicals. The company is focusing to commercialize innovative dormant technologies of Japanese corporations as well as universities and research institutions using licensing agreements and carve-outs. JMTC will continue to contribute to creating innovation in the materials industry in Japan by commercializing unutilized technologies.