



IBS Center for Multidimensional Carbon Materials



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Polybenzoxazine Composites for Friction and Self-Lubricating Applications

JUNE 9 (SUN) | Bldg. 101
15:00 | Seminar Room on the 1st floor

Polymer composites containing different reinforcements and fillers of several engineering polymers, one of the most rapidly growing classes of polymer composites are being used increasingly for technological applications, including industrial equipment, self-lubricating materials, automotive, and aerospace. The tribological behavior of the materials of these applications—different from much better understood tribological properties of metals and ceramics is of interest. This present chapter describes polymer composites based on polybenzoxazine, a relatively novel class thermosetting phenolic resin, that is recently attracting much attention both industries and academic researches. The properties of polybenzoxazinebased composites can be varied and optimized over a wide range with regard to the requirement of the particular application, i.e., from low friction and wear rate for self-lubricating to high friction combined with low wear rate for brake pads. Further information is given on the reinforcing fibers dependence of friction coefficient and wear rate of copper-free composites based on polybenzoxazine since environmental requirements for new brake pad materials are becoming increasingly important due to the increasing contribution of non-exhaust emissions to vehicular traffic pollution.

You are cordially invited to attend!

Special Seminar