



## Development Of Sponge Fiber And Particulate Palm Kernel Shell Ash Reinforced Polypropylene Hybrid Composites

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Alkanethiol self-assembled monolayers (SAMs) have been widely considered for potential applications. The most popular method for depositing a molecular layer on expensive metal surfaces is a chemisorption of organosulfur molecules such as alkanethiols via the formation of SAMs. Due to the high lipophilicity of alkanethiol, use of organic solvent has been unavoidable until now. Here we have designed and synthesized long chain alkanethiol derivatives which are water soluble. We have selected octadecanethiol for thiol probe and it has been connected with branched oligoglycerols (BGL) through succinyl residue by thioester linkage formation. BGL is a water-soluble organic molecule which converted lipophilic octadecanethiol (ODT) to water-soluble derivative (ODT–Su–BGL). At the point of solution preparation, ODT–Su–BGL has no free –SH functionality. Although a number of reports for coating with thiol or the corresponding disulfides

is available, no one has examined that thioester (a protected thiol) can produce SAMs on metal surface. However, in the field of transition metal chemistry, several low-valent metal complexes catalyses the cleavage of thioester to afford S-metal bond. Accordingly, the octadecanethiol derivative (ODT–Su–BGL) was applied for novel transition metal coating in water and the thioester linkage was probably activated by metal itself to cleave S–CO bond to afford octadecanethiolate residue (RS–). In fact, the resulting property of the silver or gold plate by treating ODT (standard method) was almost the same as by treating ODT–Su–BGL in water. In conclusion, we developed an environmentally friendly coating method.

### Biography

Mr. Idrish is a PhD. fellow under the Faculty of Pharmaceutical Sciences in the University of Tokushima, Japan. He is now synthesizing water-soluble Organic Materials in his laboratory. Mr. Idrish has been serving as a Faculty Member in the Mawlana Bhashani Science and Technology University, Bangladesh. Heavy metals

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