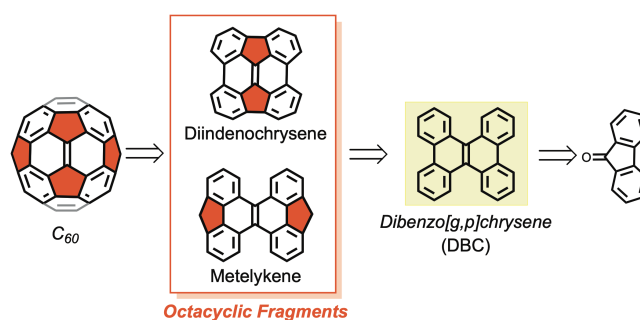


1. The subject of a lecture:

“Solution-Compatible Synthesis of Octacyclic C₆₀ Fragments”

2. Abstract:

Presented here is synthesis of octacyclic C₆₀ fragments, wherein twofold pentagons were fused into six hexagons of dibenzo[*g,p*]chrysenes (DBC). Two kinds of archetypal skeletons have been created depending on the location of pentagons: One is a rigid bowl-shaped structure, and the other is a flexible non-planar framework. The key to success in both types lies in solution-phase synthesis, which was ascribed to multi-substituted DBCs having alkyl groups as a solubilizing agent and functional moieties as a reactive site that could be further converted. The solution-processable DBCs undertook conventional cyclization protocols, and enabled forming assembly of pentagons right beside hexagons beyond steric barrier. This lecture will account for solution-compatible schemes that provide DBC-based synthesis of a new C₆₀ fragmentary octacycle which we named *Metelykene*.



3. Key words:

Dibenzo[*g,p*]chrysenes, Buckybowls, Buckminsterfullerene, Fluorenones, Polycycles;

Metelykene