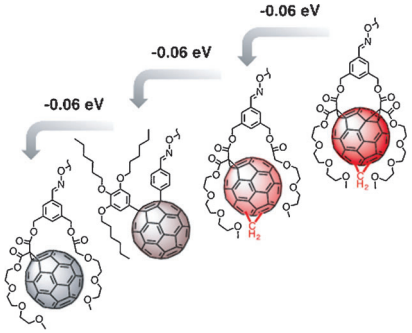
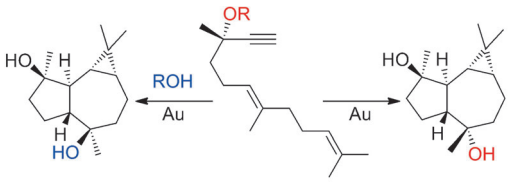
Supramolecular Chemistry



Stacked up: With molecular-level precision, 1,4-diaryl-, methano-, and Bingel fullerenes are engineered into multicomponent architectures by surface-initiated ring-opening disulfide exchange polymerization and templated stack exchange with orthogonal dynamic covalent hydrazone chemistry (see scheme). The results validate the concept of building triple-channel photosystems with oriented strings of fullerenes for directional electron transport.

Natural Product Synthesis



Aromasynthesis: Aromadendrane sesquiterpenes (−)-epiglobulol, (−)-4α,7α-aromadendranediol, and (−)-4β,7α-aromadendranediol are synthesized in only seven steps from (*E*,*E*)-farnesol by a stereodivergent gold(I)-catalyzed cascade reaction.

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Flashback: 50 Years Ago . . .

Anabolic agents and ovulation control are just two uses of non-aromatic 19-norsteroids, which were discussed in a Review by T. B. Windholz and M. Windholz, who outlined total syntheses, aromatization, and intramolecular functionalization reactions. M. Schlosser continued his series of Reviews on organosodium and organopotassium compounds, and in this issue he discussed the preparation and synthetic applications of these species.

R. W. Hoffmann and H. Häuser reported on the synthesis and cycloaddition reactions of tetramethoxyethylene. This compound is formed by the decomposition of bicyclo[2.2.1]heptadiene derivatives and reacts with compounds containing double bonds to form carbocyclic or heterocyclic four-membered rings. Hoffmann's Essay on the changes in natural product synthesis over time was published in the 125th Jubilee Issue (*Angew. Chem. Int. Ed.* **2013**, *52*, 123).

D. Söll and H. G. Khorana reported on the synthesis of ribodinucleotides with 3'-phosphate end groups in a procedure that avoids the use of an acid-labile protecting group. The target compounds can be polymerized to form ribopolynucleotides. Söll's report on recoding the genetic code with selenocysteine was recently featured on the cover of *Angewandte Chemie* (*Angew. Chem. Int. Ed.* **2014**, *53*, 319–323).

A. Engelbrecht and F. Sladky described the reaction of $BaTeO_4$ and HSO_3F, which they expected to form TeO_2F_2 but instead produced pentafluoro-orthotelluric acid ($HTeOF_5$). The product was a glassy crystalline solid with a melting point of 40 °C and its stability was attributed to Te^{VI} having an octahedral configuration.

Read more in Issue 5/1964.