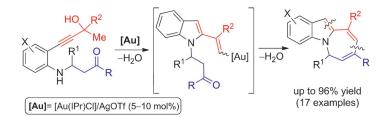


## **Gold Catalysis**

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One-Pot Gold-Catalyzed Synthesis of Azepino[1,2-a]indoles



Indoles from scratch: A gold(I)/N-heterocyclic carbene complex (IPr=1,3-di-(isopropylphenyl)imidazol-2-ylidene) was found to be particularly effective as a catalyst, enabling the one-pot synthesis of tricyclic azepinoindoles by an unprece-

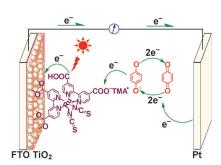
dented cascade reaction. Readily available substrates, high chemoselectivity, good yields, and water as the only stoichiometric by-product are some of the main advantages of this method.

## Solar Cells



Efficient Dye-Sensitized Solar Cells Based on Hydroquinone/Benzoquinone as a Bioinspired Redox Couple

A hybrid electrolyte involving tetramethy-lammonium (TMA) hydroquinone/benzoquinone redox couple is formulated. This electrolyte is more transparent than the traditional  $I^-/I_3^-$  electrolyte and has negligible absorption in the visible region. Dye-sensitized solar cells using the hybrid electrolyte show higher light-to-electricity conversion efficiency. FTO = fluorine-doped tin oxide.



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## 50 Years Ago ...

Angewandte Chemie International Edition was first published in 1962, the mother journal first in 1888. In this monthly flashback, we feature some of the articles that appeared 50 years ago. This look back can open our eyes, stimulate discussion, or even raise a smile.

Women in chemistry was a central topic of the International Year of Chemistry in 2011, and Issue 4/2011 was even dedicated entirely to this topic. 50 years ago, reports from female chemists were more rare, but still appeared in Angewandte Chemie: Margot Becke-Goehring and H. P. Latscha described the synthesis of the alkylated disulfur(IV) nitride [(CH<sub>3</sub>)<sub>2</sub>S-N=S(CH<sub>3</sub>)<sub>2</sub>]Cl. This compound was produced in 60% yield from the reaction of trithiazyl chloride with dimethyl sulfoxide. Becke-Goehring, who was the mentor of the late Rolf Appel (see recent Obituary), was Rector of the University of Heidelberg and later Director of the Gmelin Institute for Inorganic Chemistry, which

was responsible for publishing the *Gmelin Handbook of Inorganic Chemistry.* 

The synthesis of anionic heterosiloxanes was reported by Hubert Schmidbaur and Max Schmidt. They described how equimolar mixtures of [{(CH<sub>3</sub>)<sub>3</sub>SiO}<sub>3</sub>X]<sub>2</sub> (X = Al or Ga) and MOSi(CH<sub>3</sub>)<sub>3</sub> (M = Li, Na, or K) reacted in CCl<sub>4</sub> to produce M[X{OSi(CH<sub>3</sub>)<sub>3</sub>]<sub>4</sub>]. Schmidbaur was later Chairman of the Editorial Board of *Angewandte Chemie* and an Essay by him on coordination chemistry at carbon is in press.

The increasing popularity of organometallic chemistry was reflected in two Communications. Hans Bock discussed the synthesis of nickel(0) dialkylcyanamide carbonyls, which were formed by the reaction of dialkylcyanamides with an excess of Ni(CO)<sub>4</sub>. These compounds, which exist as orange crystals, comprise two nickel centers that are bridged by two carbonyl groups. Ernst Bayer et al. reported the synthesis of a ferrole dicarboxylic acid dimethyl ester tricarbonyl compound. Ferrole is a five-membered heterocycle that contains iron as the heteroatom and is formed by the elimination reaction of 1,4-dichlorobutadiene derivatives.

Read more in Issue 10/1962