



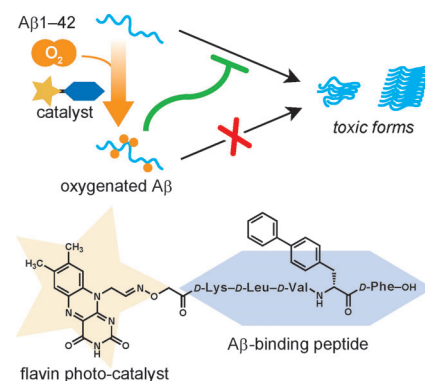
## Alzheimer's Disease

A. Taniguchi, D. Sasaki, A. Shiohara,  
T. Iwatsubo, T. Tomita, Y. Sohma,\*  
M. Kanai\* 1382–1385



Attenuation of the Aggregation and  
Neurotoxicity of Amyloid- $\beta$  Peptides by  
Catalytic Photooxygenation

**Light makes right:** Riboflavin-catalyzed photooxygenation of amyloid- $\beta$  peptide ( $A\beta$ ) 1–42 occurred in well-defined positions under physiologically relevant conditions. Selective, cell-compatible photooxygenation of  $A\beta$ 1–42 by the flavin catalyst attached to an  $A\beta$ -binding peptide markedly decreased aggregation and neurotoxicity of  $A\beta$ ; the native  $A\beta$  was even switched from a pathogen to an aggregation inhibitor.



## Chiroptical Effects

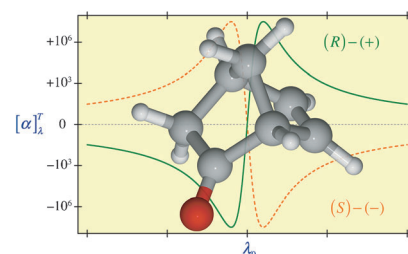
P. Lahiri, K. B. Wiberg, P. H. Vaccaro,\*  
M. Caricato, T. D. Crawford 1386–1389



Large Solvation Effect in the Optical  
Rotatory Dispersion of Norbornenone

### Solvation and dispersive optical activity:

The particularly large specific optical rotation of (1*R*,4*R*)-norbornenone has been probed under solvated and isolated (vapor-phase) conditions. The pronounced influence that solvent degrees of freedom exert upon intrinsic chiroptical properties could therefore be documented.



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# Flashback: 50 Years Ago ...

Defensive substances was the topic of a Review by H. Schildknecht. In this case, the substances were the compounds used for defensive secretion by arthropods, including beetles, earwigs, and millipedes. Analysis of the defensive substances showed them to contain quinones, carboxylic acids, and aromatic aldehydes.

Rolf Huisgen reported his latest results on 1,3-dipolar cycloaddition reactions in two Communications, including the reactions of either azlactones (oxazolones) or mesoionic compounds as 1,3-dipoles in the synthesis of functionalized pyr-

roles. He also summarized kinetic investigations into the valence tautomerism of cyclooctatetraene in a Review.

Ernst Otto Fischer, who shared the 1973 Nobel Prize in Chemistry with Geoffrey Wilkinson, also published two Communications—on the topic of dicyclopentadienyl complexes. The first report was on the synthesis of dicyclopentadienyleuropium by reacting metallic europium with cyclopentadiene in liquid ammonia, and the second dealt with the reaction of  $[C_5H_5MoC_6H_6(CO)]PF_6$  with hydride ions to form the  $\pi$  complex  $C_5H_5MoC_6H_5$ . For an account of the

history of sandwich complexes, see *Angew. Chem. Int. Ed.* **2012**, 124, 6052–6058.

Heinz Staab reported the synthesis of the hitherto elusive formyl chloride on a preparative scale by the reaction of 1-formylimidazole with HCl at  $-60^\circ\text{C}$  in chloroform. The synthesis is particularly practical as the imidazolium chloride byproduct precipitates from the solution and can be removed by filtration.

*Read more in Issue 2/1964.*