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**Nobel Lectures: Green Fluorescent Protein**

O. Shimomura, M. Chalfie and R. Y. Tsien

**Oxygen-Activating Iron Complexes**

N. Burzlaff

**Molecular Electronic Junctions**

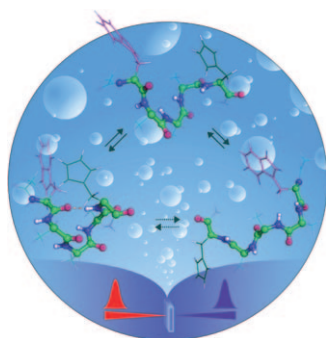
M. Mayor



## Cover Picture

**Osamu Shimomura,\*  
Martin Chalfie,\* and  
Roger Y. Tsien\***

*The green fluorescent protein* is an invaluable tool in molecular and cellular biology. The cover picture shows the confocal fluorescence image of a cell with GFP-labeled peroxisomes (blue: DNA, red: microtubules of the spindle fibers). At mitosis, most peroxisomes are randomly distributed in the cytoplasm and the majority are not associated with the microtubules in the mitotic spindle. As the cell divides, the peroxisomes are distributed randomly, together with the cytoplasm, to the daughter cells, which suggests that the inheritance of peroxisomes in cells is stochastic rather than ordered. All that can be achieved with the green fluorescent protein can be found in the Nobel Lectures by O. Shimomura, M. Chalfie, and R. Tsien on page 5590 ff. Picture courtesy of Thomas Deerinck, Mark Ellisman, and Roger Tsien, University of California San Diego.

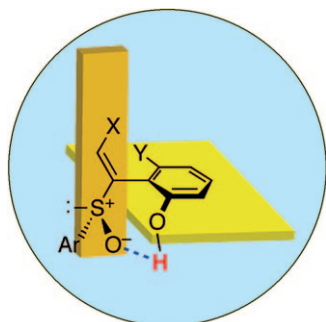
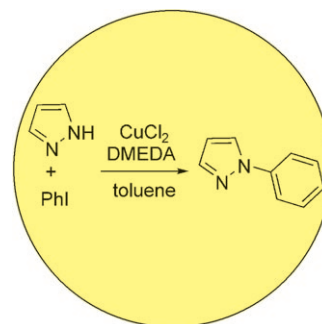


### ***$\alpha$ Helix Nucleation Dynamics***

In the Communication on page 5628 ff., A. H. Zewail et al. show that a laser temperature jump induces folding of  $\alpha$ -helical peptides. Time-resolved spectroscopy reveals nanosecond folding, redefining “ultrafast dynamics” in this field.

### ***Iron or Copper?***

As little as 0.001 mol % of a copper salt can catalyze the arylation of nucleophiles with phenyl iodide, as described by P.-E. Norrby, C. Bolm, et al. in the Communication on page 5691 ff. Possible consequences for this reaction, which was believed to be catalyzed by iron, are discussed by S. L. Buchwald and C. Bolm in the correspondence on page 5586 ff.



### ***Cyclophanes***

A method for the enantioselective synthesis of [10]- and [12]paracyclophanes is introduced by K. Suzuki et al. in the Communication on page 5638 ff. The key is conformational control of the precursor styrene derivatives by hydrogen bonding.