

# Think It Over

---



This section of *Resonance* presents thought-provoking questions, and discusses answers a few months later. Readers are invited to send new questions, solutions to old ones and comments, to 'Think It Over', *Resonance*, Indian Academy of Sciences, Bangalore 560 080. Items illustrating ideas and concepts will generally be chosen.

---

## Woodward Seminars

S Ranganathan  
Email: srgiict@gmail.com

### A prologue to ....

**“A Stool has been sitting outside one of our labs. It has gone missing for the last three days, if it is returned without delay we will turn it as a temporary loan. Otherwise it will be treated as a theft.”**

*– R B Woodward*

**P.S. The stool was never found again.**

In the Boston area 'Woodward Seminars' were quite famous. They always took place on Thursdays, started around 8.00 pm and were open ended!

Most of us had our baptism from these seminars! It would start with 'an entertainment' where a sacrificial scientist (postdocs, academists, visitors, ...) would make a presentation of his work. This would be followed by a lengthy analysis by all and RB enjoyed making most of the comments.

### Keywords

Reaction mechanisms, foundation for organic synthesis, brain teasers.

Then, major developments in organic chemistry, of the interim period, would be beautifully analyzed by him.

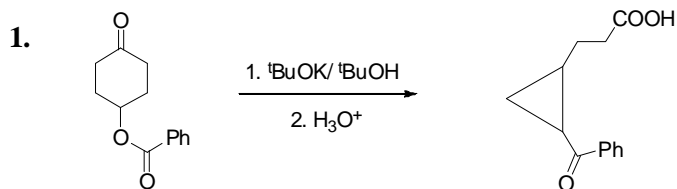
The final part would be the 'show', where RB handpicked



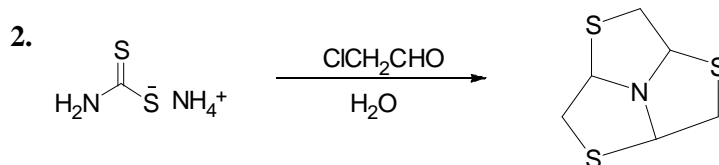
THINK IT OVER

unusual transformations. These were drawn and the audience was invited to solve them. Most of us made false starts and gave up midway! Then RB would regale us with a detailed analysis.

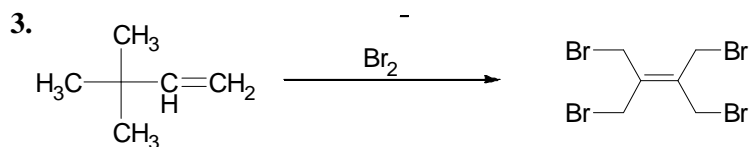
I have chosen 14 examples of the type of problems that would have fascinated RB:



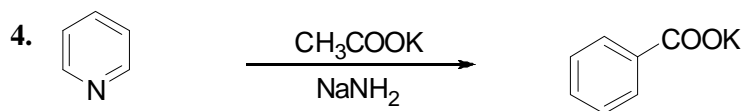
[P Yates and C D Anderson, *J. Am. chem. Soc.*, Vol.85, p.2937 1963.]



[R C Fort Jr. and W L Semen, *J. Org. Chem.*, Vol.32, p.3685, 1967.]



[W L Collier and R S Macomber, *J. Org. Chem.*, Vol.38, p.1367, 1973.]

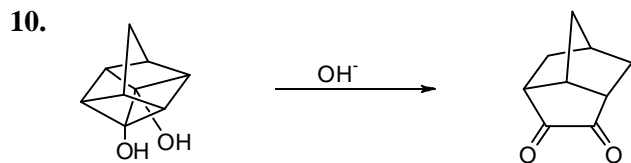


[L Schmerling and W G Toekeit, *J. Am. Chem. Soc.*, Vol. 86, p.1259, 1964.]

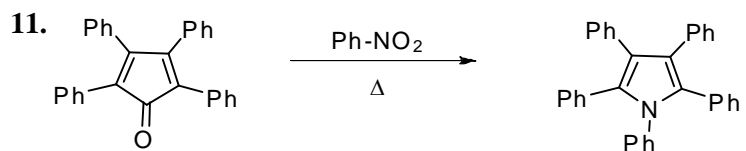




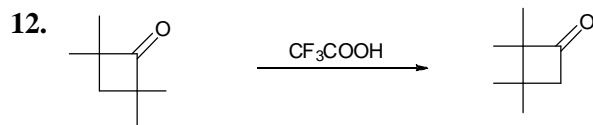
THINK IT OVER



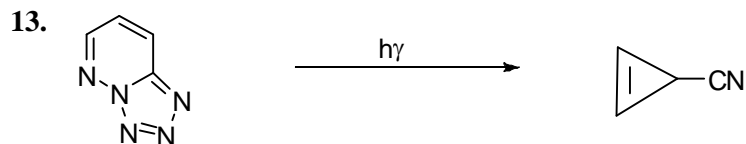
[R D Miller and D Dolce, *Tetrahedron Letters*, Vol.14, p.1151, 1973.]



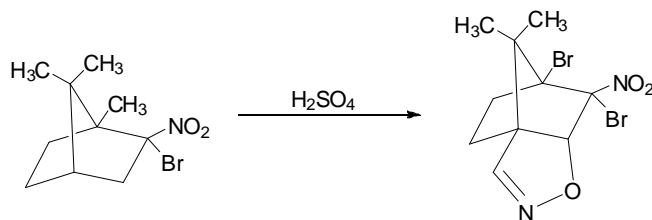
[S Ranganathan and S K Kar, *Tetrahedron Letters*, Vol.12, p.1885, 1971.]



[F B Wargnier, *Tetrahedron Letters*, p.1589, Vol.15, 1974.]



[T Tsuchiya, H Arai and H Igeta, *Chem Comm.*, p.1059, 1972.]



[E E Van Tamelen and J E Brenner, *J. Am. Chem. Soc.*, Vol.79, p.3839, 1957.]

