

## TOPICS FOR INVESTIGATION

1. What methods are and have been used to detect NO and NO <sub>2</sub> in the stratosphere and troposphere?	
2. What methods are available to synthesize the non-CFC refrigerants used in automobiles?	Andreas & Betchart
3. How do viruses utilize osmotic pressure for DNA or RNA delivery?	Shiheido & Sono
4. What methods can be used to assess the exposure of children to lead (Pb)?	Gorlin & Richman
5. What are some of the ways dendrimers have been used as synthetic enzymes/catalysts?	
6. Why is it of interest to synthesize molecules that contain crown ethers linked through an azo group?	
7. What are some of the methods that have been used to prepare proteins with non-naturally occurring amino acids?	
8. What evidence has been given supporting the claim that NH bonds are not hydrogen donors?	
9. What laboratory syntheses are known for taxol, a potent anti-cancer agent? What is its mode of action?	Bhate & Boyd
10. What approaches are possible for replacing chlorine as a bleaching agent in the manufacture of paper?	Cohen & Loa

11. What is the most effective analytical method for boswellic acid?

12. How do quantum dots function as part of an immunosensor?

13. How have chemists synthesized molecular knots, catenanes, and Borromean rings?

14. What is the role of G-coupled protein receptors in the human olfactory system?

Baltaretu & Eck