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Help with Organic Chemistry Reactions from *JCE* WebWare

Would you like to offer your students additional help learning the numerous reactions that are so important to master in first- and second-semester organic chemistry? Let them exchange or augment their homemade flash cards with this online "Reaction Rolodex" of reactions, logically organized, accurately proofed, and available 24 hours a day, seven days a week from any Internet-connected computer!

Eric Mahan's *"Reaction Rolodex": A Web-Based System for Learning Reactions in Organic Chemistry* makes it fun and easy to learn and review these reactions and to practice predicting products of the reactions. This ready-to-use library of online reaction flash cards covers a broad spectrum of organic chemistry reactions and contains more than 35 reaction flash cards with more in development!

View this and other Web-based instructional tools in the peer-reviewed and open-review collections of *JCE* WebWare at *http://www.JCE.DivCHED.org/JCEDLib/WebWare/*.

The "Reaction Rolodex": A Web-Based System for Learning Reactions in Organic Chemistry

by Eric Mahan, Department of Chemistry, University of Hartford, West Hartford, CT 06117

Keywords: Second-Year Undergraduate; Organic Chemistry; Computer-Based Learning, Internet/Web-Based Learning

Requires: Web browser with Macromedia Flash plugin installed

This Web-based system of note cards has been developed to aid students in learning the vast number of reactions encountered in organic chemistry. A thorough knowledge of these reactions is essential for success in first- and second-semester organic chemistry courses. The reactions are organized by functional group and can be chosen from a menu at the left side of the Web page. Once a particular reaction has been selected, the main frame displays the reactant(s) and reagent(s) along with a question mark in place of the product. After considering the reaction as long as needed, the user can click the question mark to reveal the reaction product. Clicking the product will again hide the answer and regenerate the question mark so that the reaction can be practiced again. Selecting other reactions from the menu on the left allows them to be practiced in the same manner.

Not only have students responded positively toward this study aid, but also an analysis of scores on the reactions section of exams in first-semester organic chemistry classes indicates significantly higher performance for classes that used the program versus those that did not.

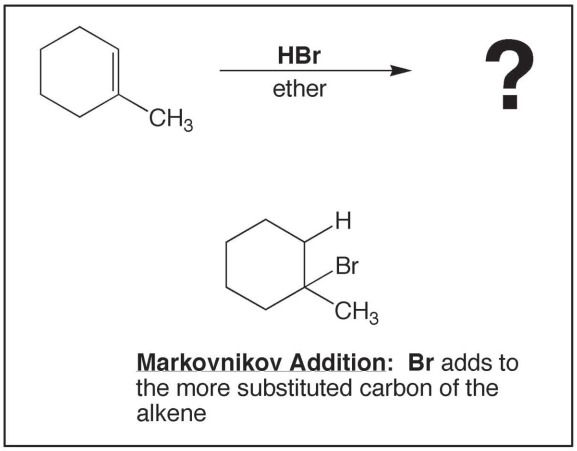

Figure 1. Representation of the reaction and product cards for addition of Hx to an alkene from *The "Reaction Rolodex": A Web-Based System for Learning Reactions in Organic Chemistry.*