



# AMERICAN CHEMICAL SOCIETY KENTUCKY LAKE SECTION

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### KLS-ACS Web Page

<http://kentuckylake.sites.acs.org/>

## April 2012 Kentucky Lake Section Meeting

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### Carr's Steakhouse

Mayfield, KY

Thursday, April 19, 2012

**Social @ 5:30, Dinner @ 6:00, Presentation @ 7:00**

*Carr's Steakhouse is located at  
213 West Broadway, Mayfield, KY 42066*

*The price is \$10 (Students \$5)*

Menu Options:

Barbecue plate or Ham plate

### Presentation:

## ***Rebooting Aromatic Substitutions***

By

**Dr. Donald Slocum**

**Western Kentucky University**

Professor Emeritus

See Reverse Side for Abstract & Biographical Sketch

## Comments from the Chair

Greetings! We have a busy month this April. We've already had a successful Leadership Retreat (thanks to everyone who contributed!) and one speaker. For the rest of the month we've got another speaker and Earth Day. Chemists Celebrate Earth Day (CCED) is the second largest promotion of the American Chemical Society, after National Chemistry Week. Contact an officer to get involved in your area! Jackson, Martin, and Paducah have planned activities so far. We also have a summer outing at the Jackson Generals planned, more details will be sent out closer to the event. We hope to see you in Mayfield in a few weeks!

Help KLS go green! Send your e-mail address to  
[Rebecca.brown@kctcs.edu](mailto:Rebecca.brown@kctcs.edu) today to receive the newsletter  
by e-mail.

Kate Stumpo

## Abstract

Textbook organic chemistry describes aromatic substitutions as taking place chiefly *via* the mechanism called electrophilic substitution (AES). Mostly such reactions lack regiospecificity and generate mixtures of *ortho*- and *para*- products. Separation of such products is difficult and usually leads to poor isolated yields of the desired isomer. In contrast, for many desired products we described regiospecific aromatic substitutions which lead to high yields of the desired isomer. Moreover, they are all effected in hydrocarbon media. These methods appear to contradict much that we understand about mechanistic organic chemistry and include:

- *ortho*-lithiations
- Halogen/metal exchange at ambient temperature
- Halogen/metal exchanges via flow chemistry
- Regiospecific *para*-iodinations and brominations

Each of these procedures goes against the grain of the current thinking in organic chemistry.

## Biographical Sketch

*Dr. Donald Slocum first received his Bachelors in English from the University of Rochester, and after a brief time in industry, continued his education by obtaining a Ph. D. from New York University under the direction of K. Mislow. From here Dr. Slocum took a number of positions over the next twenty years including professor of chemistry at SIU, Carbondale, lecturer at Carnegie-Mellon, senior scientist at Gulf Oil, Program Director of the Chemical Dynamics section of the NSF, and Program Leader of the Division of Educational Programs at Argonne National Laboratories. Since 1995 he has lived in Bowling Green, KY at Western Kentucky University where he has served as department head, professor, and now professor emeritus.*