

The Blue Ridge Chemist

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Randolph College Hosts the November Meeting

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VIRGINIA BLUE RIDGE SECTION AMERICAN CHEMICAL SOCIETY

643rd SECTION MEETING
Hosted by Randolph College
Wednesday, November 16, 2011

PROGRAM:

5:30-6:30 Social Time, Alice Ashley Jack Room
6:30-7:30 Dinner, Alice Ashley Jack Room
7:30-8:30 Presentation, Alice Ashley Jack Room

The social time and dinner will take place in the Alice Ashley Jack Room in Smith Hall. The speaker is Dr. David M. Johnson from Ferrum College, who will present a talk on "The use of Semiconductors in Photocatalytic Systems".

The dinner will consist of Mediterranean chicken breast with tomatoes, capers, peppers, garlic, lemon and olives, orzo & rice pilaf, snap pea and carrot bâtonnet, dessert, and beverage. Vegetarian meals will be made upon request. Cost for the meal is \$14.00, with students and retired ACS members being half price.

Reservation for the dinner should be made by Wednesday, October 9, **SEVEN DAYS** before the meeting by calling Dr. Ann Fabirkiewicz (434) 947-8495, or e-mail to afab@randolphcollege.edu, or regular mail to Dr. Ann Fabirkiewicz, Garber Hall 309, 80 Wiley Drive, Ferrum, VA 24088

Correction after mailing: the reservation deadline month is November and the address for Dr. Ann Fabirkiewicz is Randolph College, 2500 Rivermont Avenue, Lynchburg, Virginia 24503.

David M. Johnson, Ferrum College
Professor of Chemistry and Environmental Science
Ferrum College

Dr. Johnson is Professor of Chemistry and Environmental Science at Ferrum College and formerly Dean of the School of Natural Sciences and Mathematics. He received his bachelors in chemistry and an M.S. and Ph.D. in Environmental Health Sciences, all from The University of Michigan. Dr. Johnson is also Senior Environmental Scientist at MapTech, Inc., in Blacksburg. He has served twice as Chair of the Virginia Blue Ridge Section of the American Chemical Society, is on the executive board of the Virginia Chapter of the Soil and Water Conservation Society, and is on the board of directors of the Children's Advocacy Center of the Blue Ridge.

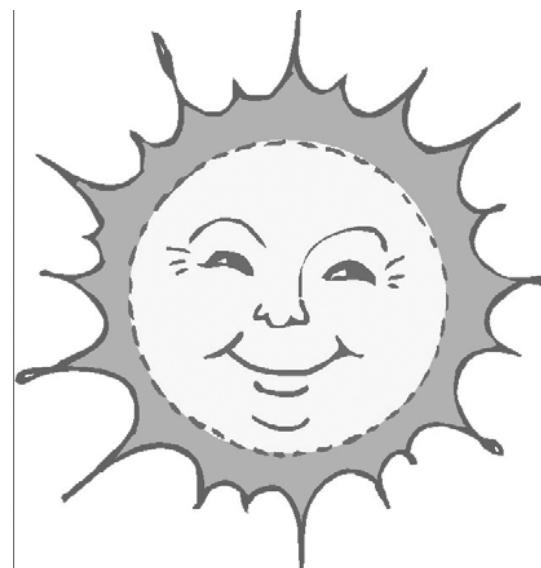


Johnson has more over 35 years of experience in water quality and helped develop long-term water quality monitoring programs on Smith Mountain Lake and Claytor Lake. He has travelled to China annually since 2004 and spent the 2010-11 academic year at China Three Gorges University in Yichang, China.

Johnson is curious about the way the world works and favors the continuation of human culture. To help in this regard, he designed and built a passive solar home and has lived in it for 27 years with his wife of 44 years. He is currently leading the start-up of the Ferrum College Center for Sustainable Development.

The Use of Semiconductors in Photocatalytic Systems

In this presentation, I'll describe my work at China Three Gorges University with the research team of Professor Yingping Huang - and show some pictures of the area. With photoactive semiconductors, a photon of appropriate energy can excite an electron from the valence band to the conduction band, producing an oxidizing hole (h^+) in the valence band and an extra electron in the conduction band that promotes reduction. This makes possible a catalytic cycle and, for several decades, chemists have been developing photocatalysts to break down organic pollutants, particularly persistent organic pollutants (POPs). Most photocatalytic systems require UV activation and acidic conditions. Dr. Huang's research objective is to develop the perfect photocatalyst; activated by visible light, working at near neutral conditions, acting selectively, cheap and nontoxic. Dr. Huang's student, Yanfen Fang, developed a photocatalyst with most of these properties for her Ph.D. project and her paper was chosen as ES&T Best Technology Paper of the Year.



Ballot, Blue Ridge Section, ACS, for 2011

The Nominating Committee has prepared the following slate of nominees for the election at the November meeting. All have agreed to serve if elected. Other nominees will be accepted from the floor at that meeting. If you would like to nominate someone, please check with that person about his or her willingness to serve.

- Chair _____ Kim Lane, Radford University

- Chair-elect _____ Natalia Smelkova, Ferrum College

- Secretary _____ Maria Puccio, Ferrum College

- Treasurer _____ Vernon Miller, Roanoke College

- Recorder _____ Gary Hollis, Roanoke College

- Newsletter Editor _____ Vernon Miller, Roanoke College

- Councilor _____ Ben Huddle, Roanoke College

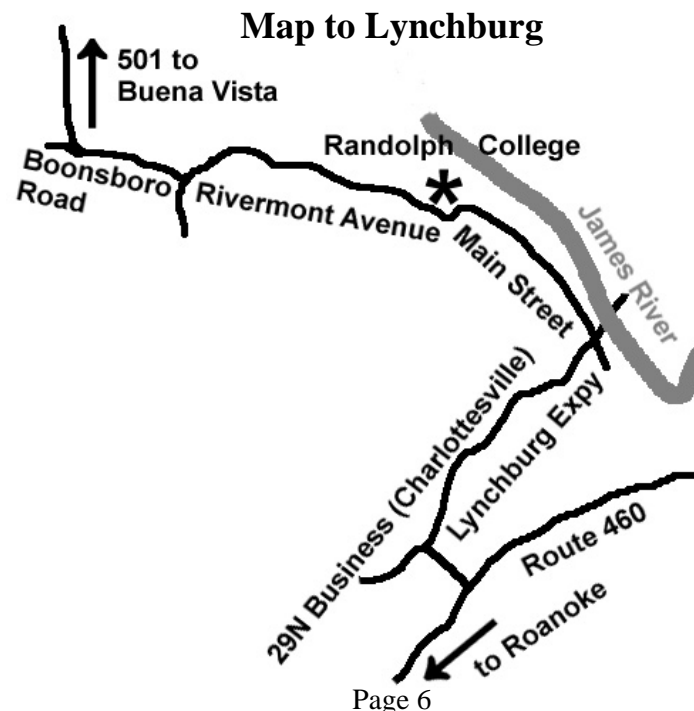
- Alternate-councilor _____ Gwen Sibert, Roanoke Valley Governor’s School, Retired

Bring your ballot to the November meeting, or mail it to Dwight Williams, Department of Chemistry, Lynchburg College, Lynchburg, VA 24501.

Directions to Lynchburg

From Lexington, VA (1 hour)
Take Route 60 to Buena Vista. From Buena Vista, follow 501S. Watch for a right turn onto a large bridge to stay on 501S. At the intersection with Boonsboro Road, turn left onto Boonsboro. Follow Boonsboro Road, which becomes Rivermont Avenue, for approximately 3.5 miles. College entrance will be on your left.

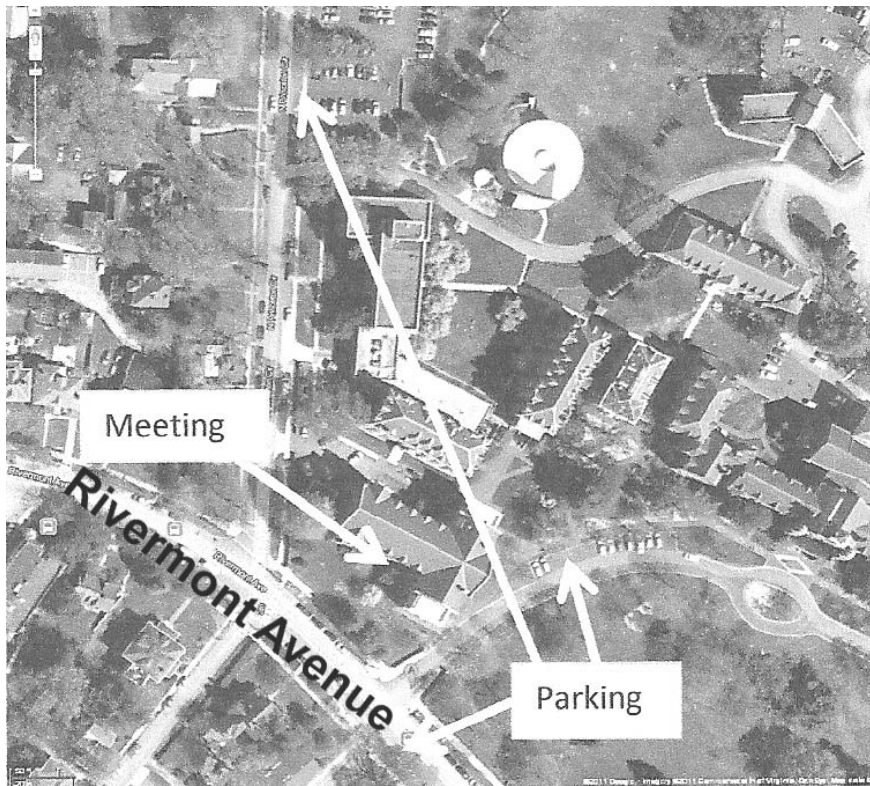
From Roanoke, VA (1 hour, 20 minutes)
Follow Route 460E. In Lynchburg, take the exit for 501N (Buena Vista/Candlers Mountain Road). This will be a left exit. After exiting, stay in the right-hand lane. After the second light, take the exit for 29N Business (Charlottesville). Take exit 1A (Main Street) and follow through downtown. After crossing 5th Street, Main Street becomes Rivermont Avenue. Continue on Rivermont Avenue approximately 2 miles. College entrance will be on your right.



Parking at Randolph College

Front campus might have some spaces available, as perhaps will Rivermont Avenue in front of the College. Alternatively there is a large lot about a block from Rivermont Avenue, down N. Princeton Circle.

Map of Parking for Smith Hall at Randolph College



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Return Service Requested

Arrangements for the January meeting are incomplete. Check the January issue of the BRC for this information.