

# The Blue Ridge Chemist

The Blue Ridge Chemist, since 1947 the  
Official Local Section Publication of the  
Virginia Blue Ridge Section, American Chemical Society



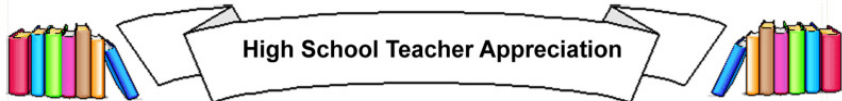
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VOLUME LXIII

April 2010

No. 4

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High School Teacher Appreciation



Outstanding High School Teacher



James Lewis Howe Awards



Undergraduate/High School Posters

**Radford University hosts April Meeting**

<http://www.acs-vbrs.org>

## VIRGINIA BLUE RIDGE SECTION AMERICAN CHEMICAL SOCIETY

**632<sup>nd</sup> SECTION MEETING**

**Hosted by Radford University**

**Wednesday, April 14, 2010**

### PROGRAM:

**5:30-6:30 Social Hour/Poster Session, Muse**

**6:30-7:30 Dinner, Muse Banquet Hall**

**7:30-8:30 Awards and talk, Muse Banquet Hall**

All events will take place in Muse Banquet Hall, located in the basement of Muse Hall. The evening's speaker is Dr. Matthew Redinbo from the University of North Carolina, who will present a talk entitled: From Atomic Structure to Cellular Function: Chemistry in the Biological Realm."

The buffet dinner will consist of tossed salad with choice of dressings, marinated London broil with Bordelaise sauce, petite chicken breast kiev, smashed seasoned red skin potatoes, seasoned green beans, gingered baby carrots, whole wheat and white rolls, fudge brownie pie, decaffeinated coffee, regular coffee. Special diets can be accommodated by mentioning when the reservations are made.

Cost for the dinner is \$14.00, with students and retired ACS members being half price. Poster presenters receive a free meal. High school teachers are guests of the section with a complementary meal for themselves and a companion. Reservations for the dinner must be made by WEDNESDAY, APRIL 7, SEVEN DAYS before the meeting, by phoning Chris Hermann at 540-831-5413, or by email to [chermann@radford.edu](mailto:chermann@radford.edu). Please note that everyone needs to request a parking pass from Dr. Hermann when a poster is submitted or a dinner reservation is made.

**Dr. Matthew Redinbo**  
**University of North Carolina at Chapel Hill**

Dr. Matthew Redinbo is Professor and Chair of the Department of Chemistry in the College of Arts and Sciences, and is Professor of Biochemistry and Biophysics in the School of Medicine at the University of North Carolina at Chapel Hill. Dr. Redinbo's work focuses on structural biology of dynamic cellular systems, with a particular emphasis on questions related to human disease. He started as an Assistant Professor at UNC Chapel Hill in 1999. Prior to that, he was a postdoctoral fellow at the University of Washington in Seattle, and received his PhD in Biochemistry from UCLA in 1995.



**"From Atomic Structure to Cellular Function:  
Chemistry in the Biological Realm"**

Understanding the manner in which biological systems harness chemistry has been significantly advanced by the ability to resolve atomic-level structures of the proteins and other macromolecules. A range of crystal structures of proteins will be presented that elucidate how small chemical molecules have large functional effects on, for example, gene transcription, lipid trafficking, bacterial walking, and DNA manipulation. Applications of some of these structures to novel approaches to human diseases will also be discussed.

**Fifty-Year Members**

In 2010, 875 ACS members will be honored as they celebrate 50 years of membership. In grateful appreciation of the many years of service they have given to the Society, a special ruby pin and a 50-year membership card, which entitles them to free attendance at all ACS meetings, were sent to them in late February. Also, they will be recognized at this April meeting, where they will each be presented with a handsome 50-year membership certificate to mark the occasion. Members who join the ranks of this elite group in 2010 will be listed in an issue of Chemical & Engineering News. Our new 50-year members are:

Dr. Harold Bell  
Blacksburg, VA

Mr. Leo Bonney  
Roanoke, VA

Dr. John Hess  
Christiansburg, VA

In addition, we have one member who has been a member of ACS for 60 years. He is:

Dr. Rosser Wayland  
Danville, VA

Congratulations!

**Christopher Bibeau**  
**Radford High School**  
**Outstanding High School Teacher Awardee**

Christopher Bibeau is in his 11th year of teaching and in his third year at Radford High School where he teaches Chemistry and AP Chemistry. Mr. Bibeau established the first AP Chemistry course taught both at Radford High and at his previous school, Haddonfield Memorial High School in New Jersey. He has served as a reader for the AP Chemistry exam and as a member of the Virginia SOL content review committee. He has also served as the sole representative from Virginia on the Praxis National Advisory Committee, a committee of eleven members selected from different states across the country to advise ETS on the construction of this test. He has written and reviewed questions both for the Praxis Test and for the Texas Assessment of Knowledge and Skills. In the summer of 2005, Mr. Bibeau worked as a teacher researcher in the RET-NANO program at Drexel University in Philadelphia, and he currently teaches General Chemistry Laboratory classes at New River Community College.



Mr. Bibeau strives to get to know each and every student and then to do his best to teach that student as an individual. He hopes to encourage as many students as possible to pursue science in general, and chemistry specifically. Currently 20 students out of about 100 seniors take AP Chemistry at Radford High School and around 26 are signed up for next year. When Mr. Bibeau is not inside teaching chemistry, he can be found outside at Bissett Park in Radford, playing Ultimate Frisbee with his students.

We congratulate Mr. Bibeau as the Outstanding High School Teacher for the Virginia Blue Ridge Section for 2010.

**JAMES LEWIS HOWE AWARDEES**

We are again pleased to be able to honor the outstanding students who are majoring in an area of chemistry in the Colleges and Universities in the Virginia Blue Ridge Local Section. These students are listed below.

**Kayla Lail**  
Concord College

HOMETOWN: North Tazewell, VA

ANTICIPATED DEGREE: B.S.  
Pre-Professional Chemistry

MEMBERSHIPS:  
ACS-SA



**Charles William Heaps, III**  
Washington and Lee University

HOMETOWN: Churchville, MD

ANTICIPATED DEGREE: B.S. in Chemistry

AWARDS:  
2007 Mary Louise Reid White Scholarship in Chemistry

MEMBERSHIPS:  
American Chemical Society Student member



**Allyson Elizabeth Stephens**

Hollins University



HOMETOWN: Yorktown, VA

ANTICIPATED DEGREE: B.S. Chemistry and Mathematics & Statistics

**AWARDS:**

Academic Excellence Award, Trustee Award, Judith Gregory Smith Award (Honorable Mention)

**HONORS:**

Hollins Scholar

**Brittany Nicole Christian**

Radford University



HOMETOWN: Cary, NC

ANTICIPATED DEGREE: B.S. Chemistry with minor in Mathematics

**AWARDS:**

Anna & Ruth Cronise Scholarship, Athletic Scholarship, Speidel Scholarship in Chemistry, Radford University Outstanding Student Award

**HONORS:**

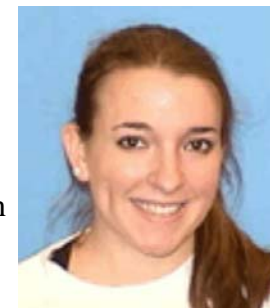
Scholar Athlete of the Year for Radford University, Academic All Conference Team (Cross Country and Track & Field), Team Captain (Cross Country and Track & Field), Deans List, Radford Nominee for Goldwater Scholarship

**MEMBERSHIPS:**

Phi Kappa Phi, Iota Sigma Pi, The National Society of Collegiate Scholars (NSCS)

**Anne M. Brown**

Roanoke College



HOMETOWN: Roanoke, VA

ANTICIPATED DEGREE: B. S. in Biochemistry and B. A. in Physics

**AWARDS:**

Junior Scholar, Summer Scholar, Goodwin-McGraw Scholarship, Target All-Around Scholarship, U.S. Airways Scholarship

**HONORS:**

Dean's List

**MEMBERSHIPS:**

Phi Beta Kappa National Honor Society, Mendel Honor Society, Alpha Lambda Delta, Student Affiliate of American Chemical Society (President), Roanoke College Student Conduct Council

**Laura Elizabeth Hanold**

Sweet Briar College



HOMETOWN: Charleston, SC

ANTICIPATED DEGREE: B.S. in Chemistry

**AWARDS:**

VFIC Undergraduate Research Fellowship, Honors Summer Research Program Fellowship, Physics Award, First Year Chemistry Award

**HONORS:**

Iota Sigma Pi, McKnight Chemistry Prize Semifinalist, Alpha Lambda Delta, Honors Scholar, Dean's List, Prothro Scholar

**MEMBERSHIPS:**

American Chemical Society

**Jacob T. Cox**  
Virginia Military Institute



HOMETOWN: Burke, VA

ANTICIPATED DEGREE: B.S. in chemistry

**AWARDS:**

Holbart L Harris Scholarship, Gottwald Chemistry Scholarship, Phi Kappa Phi Membership, Phi Theta Kappa Membership, Gamma Sigma Epsilon Membership, Omicron Delta Kappa Membership, 2008 Herbert Ritchey Award, 2007 Ralph Bowen Linville Award, 2008 Foundation for Asia-Pacific Education Scholarship, 2008 Ruth Miller Lanford Memorial Fellowship, 2008 Institute Scholar Award Nominee

**HONORS:**

Institute Scholar, Honors Program Member, Dean's list, 2009 NSF Solid State Chemistry Summer REU Participant, 2009 Nanosystems Chemistry & Engineering Research (NanoCER) Program at UCLA Participant

**MEMBERSHIPS:**

ACS

**Rebika Shrestha**

Randolph College



HOMETOWN: Bharatpur, Nepal

ANTICIPATED DEGREE: B.S. in Mathematics and in Chemistry

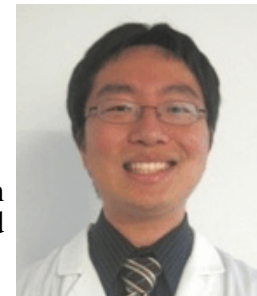
**AWARDS:**

Department of Chemistry – Analytical Chemistry Award

**MEMBERSHIPS:**

Iota Sigma Pi

**Sung Eun Yun**  
Virginia Tech – Biochemistry



HOMETOWN: Woodbridge, VA

ANTICIPATED DEGREE: B.S. in Biochemistry, Minor in Medicine & Society and Chemistry

**AWARDS:**

Engel Scholarship in Biochemistry, Multicultural Academics Opportunities Program Scholarship

**HONORS:**

Dean's List

**MEMBERSHIPS:**

Microbiology Club (President), Phi Beta Kappa, American Society for Microbiology, Gamma Sigma Delta, Phi Sigma Society, Alpha Epsilon

**Kelly Daly**

Virginia Tech – Chemistry



HOMETOWN: Londonderry, NH

ANTICIPATED DEGREE: B.S. Chemistry

**AWARDS:**

P. Wightman Scholarship, Chemistry Department Academic Scholarship, College of Science's Accenture Scholarship, John Philip Sousa Music Award

**HONORS:**

Platinum Service Award: Completed over 120 community service hours in one semester 2008, 2009

**MEMBERSHIPS:**

Adhesion Society, Chi Delta Alpha Service Sorority, Student Leader Engagement Council, Leadership Tech

**Erica E. Neverman**

Virginia Tech – Chemical Engineering

HOMETOWN: Londonderry, NH

ANTICIPATED DEGREE: B.S. in Chemical Engineering, minor in Chemistry

## AWARDS:

Eleanor Davenport Leadership Scholarship; Donald F. Othmer Sophomore Academic Excellence Award, AIChE; James and Jane Gary Scholarship; Richard E. Herron Scholarship; Margaret F. Bogle Scholarship

## HONORS:

Dean's List with Distinction

## MEMBERSHIPS:

National Society of Collegiate Scholars; American Institute of Chemical Engineers; Omega Chi Epsilon, Chemical Engineering Honors Fraternity

**Ashley Rose Longstreet**

Lynchburg College

HOMETOWN: West Creek, NJ

ANTICIPATED DEGREE: B.S. Biomedical Science and Chemistry

## AWARDS:

Volunteer Award on Lynchburg College Emergency Medical Services

## HONORS:

Westover Honors Program

## MEMBERSHIPS:

Iota Sigma Pi, Phi Kappa Phi, Omicron Delta Kappa, Beta Beta Beta, Phi Eta Sigma, SA-ACS (secretary), Operation Smile (vice president)

**Dr. James Lewis Howe**

1859-1955

James Lewis Howe was for many years Professor of Chemistry and Head of the Department at Washington and Lee University. As one of the most distinguished chemists in the Blue Ridge Section, we have chosen to name our annual awards to outstanding students in his memory.

Dr. Howe was born in Newburyport, Massachusetts in 1859; this is the same year in which Svante Arrhenius was born, and during Dr. Howe's professional career he was to know many of the famous early chemists, such as Liebig, Wohler, Bunsen, and many others. He attended Amherst College, where he pursued his favorite subjects of chemistry, German, and religion. He was selected to deliver the graduation address on the subject of "The Scientific Method and Religion".

He earned his M.S. and Ph.D. degrees at the University of Gottingen, and published his first scientific papers on the subject of aromatic carbon chemistry. He then began an intensive literature search of the platinum metals, beginning a bibliography for which he was to become world famous. He decided that the most interesting and least known metal of the group was ruthenium.

In 1883 he married Henrietta Leavenworth Marvine of Scranton, Pennsylvania. This marked the beginning of a marriage of 60 years duration. The Howes became the parents of two daughters and a son (who was also a chemist). After Mrs. Howe's death in 1944, one of his daughters, Guendolen Howe, became her father's constant companion.

Dr. Howe's teaching career began at Brooks Military Academy in Cleveland, Ohio. From there he went to Central University in Richmond, Kentucky, where he was Professor of Chemistry (and later Physics and Geology as well). In 1894 he accepted the Chair of

Chemistry at Washington and Lee University, and for almost half a century he was at that institution.

It was here that he began his intensive bibliographic study of the platinum group and his outstanding research on the element ruthenium. In 1917 he was appointed chairman of a special subcommittee on platinum of the National Research Council. His work led to the development of platinum alloys, and averted a potentially crucial shortage in platinum, threatening our efforts during World War I. He later received several presidential commissions dealing with the platinum metals.

Dr. Howe was beloved by his students and colleagues at W&L. For the first fifteen years he was a one-person department. His lectures were informal, but completely up to date. He was known for his extreme congeniality, charming personality, mild manner, and even temper. He was unceasingly helpful, and believed that more could be learned in the laboratory than from lectures.

Dr. Howe's unflagging energy found him serving in many capacities outside the scientific field. He was an Elder of the Lexington Presbyterian Church, an active Mason, and held positions in the Town Council in Lexington and the People's National Bank of Lexington.

## 18<sup>th</sup> Annual Undergraduate/High School Poster Session

The Virginia Blue Ridge Section of the American Chemical Society is sponsoring the eighteenth Annual Undergraduate/High School Poster Session as a part of the April 14, 2010 meeting at Radford University. Poster boards will be provided.

If you have a student or students who desire to participate, submit the information below by email to Chris Hermann (chermann@radford.edu) by April 5, 2010. **This is a firm deadline. No poster submissions will be accepted after this time.** All students and faculty will get email confirmation. If you do not get an email reply, then your submission was not received and you cannot present.

Name of Project: \_\_\_\_\_

\_\_\_\_\_

Name(s) of Student(s): \_\_\_\_\_

Affiliation (name of high school, college, or university): \_\_\_\_\_

\_\_\_\_\_

Class of Student(s) (freshman, sophomore, junior, senior): \_\_\_\_\_

Student(s) email address: \_\_\_\_\_

Advisor's Name, Address, Telephone Number, and email address:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Poster board (48" by 48") with tripod on table or just table will be provided. Please specify what you need.

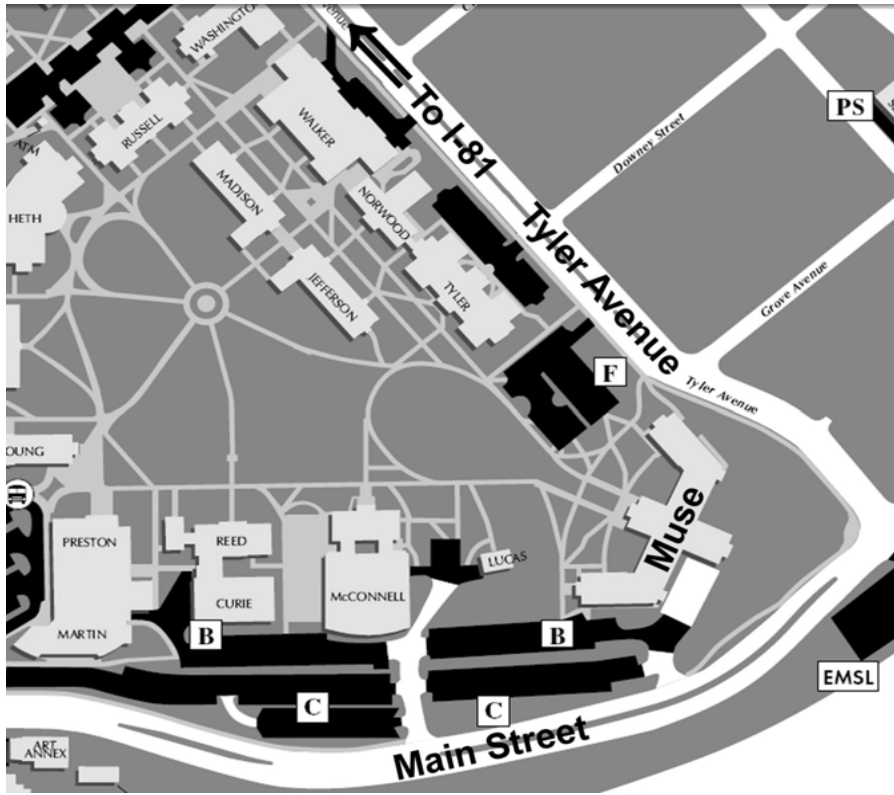
\_\_\_\_\_ poster board with tripod on table      \_\_\_\_\_ only table

## Directions for Radford University

Directions: Take I-81 to exit 109 and follow Route 177 (Tyler Ave) to Main Street. Go straight into the parking lot beside the bank and make a right, then another right and go into the parking lot. CAUTION: Parking permits are required before 6:00. A parking permit can be received by email from Chris Hermann.

## Map of Radford University

Adapted from Radford University Web Site



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U.S. Postage  
**PAID**  
Salem, VA 24153  
Permit No. 31

Vernon Miller, Editor  
VA Blue Ridge Section, American Chemical Soc.  
Chemistry Dept., Roanoke College  
Salem, VA 24153-3789

Return Service Requested

As is our custom, the May meeting will be an outing or a tour. Look for the details in the next BRC.