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DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

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February is Black History Month

African Americans have made significant contributions to science, many overcoming substantial obstacles.

The University of Arkansas was the first major southern university to integrate voluntarily and peacefully in 1948 with the admission of Silas Hunt to the Law School.

Fayetteville High School is recognized as being the first school in the state of Arkansas to voluntarily enforce desegregation in 1954 and its school board was the first in the state to approve desegregation.

Paul Adams became the first African American professor hired in the department in 2007. More inside

Alumna Honored as Technology Leader

Bridgette (Blackman) Shannon, Ph.D. '07, was honored as a Modern Day Technology Leader (MDTL) during the 25th meeting of the Black Engineer of the Year Awards and STEM Global Competitiveness Conference in Washington D.C., Feb. 17-19.

Shannon is a development scientist for Corning Incorporated and one of three employees receiving the MDTL.

The award recognizes “bright, young, up-and-coming women and men who are shaping the future of engineering, science, and technology.”

She is from Little Rock and holds a bachelor’s degree from Henderson State University. She did her doctoral work under the direction of Xiaogang Peng.



Bridgette (Blackman) Shannon in 2004

Region Interrupted

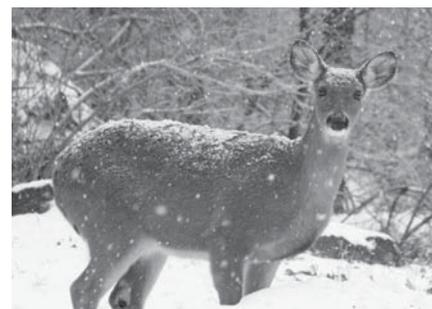
The spring semester has been complicated by back-to-back snow storms – the latest bringing record breaking amounts of 21.5 inches and higher, causing the campus to close.



At left: The Linden trees on the east side of the Chemistry Building, by Denise Greathouse.

Top right: A snowboarder at the top of Cleveland Street going west, by Frank Millett.

Bottom right: A deer is covered in snow in Millett’s backyard, by Frank Millett.



Faculty News

Adjunct Professor **Xiaogang Peng** is ranked number eight among the top 100 material chemists of the past decade as compiled by Thomson Reuters.

Derek Sears is serving on an NSF REU panel in astronomy. He recently received a grant from NASA to write a series of articles on the history of cosmochemistry.

Safety Tip

Keep a watchful eye on the age of your chemical inventory and discard old inventory in a timely manner, especially compounds that can form peroxides.

Fry Lecture



Alumna Holly Childs, B.S. '62, with Fry Lecturer Donna Blackmond, of the Scripps Research Institute, in January.

African American Pioneers in Science continued from page 1

Edward Alexander Bouchet (1852-1918) was the sixth American to earn a Ph.D. in physics and the first African American to receive a Ph.D. in any field from an American university.

He entered Yale College in 1870 and graduated summa cum laude sixth in his class in 1874. He was the first African American nominated for Phi Beta Kappa.

George Washington Carver (1860's-1943) was born into slavery and helped revolutionize the South's economy by liberating it from dependence on cotton as its sole crop. He developed more than 300 products from peanuts including cosmetics, dyes, paints, plastics, gasoline, and nitroglycerin.

The George Washington Carver National Monument, near Diamond, Mo., was the first national monument dedicated to an African American.

Charles Henry Turner (1867-1923) was the first African American to earn a Ph.D. from the University of Chicago, to earn a doctoral degree in zoology, to publish in the *Journal of Animal Behavior*, and possibly the first African American to publish in the prestigious journal *Science*.

Herbert Clay Scurlock (1875-1952) was a biochemist who pioneered the application of radiation therapy for the treatment of cancer and the use of x-ray to diagnose dental problems.

Percy L. Julian (1899-1975) was a research chemist whose trail-blazing work

in uses for soybeans resulted in the development of a multiplicity of new products, the most important of which are low cost drugs and hormones. His research led to the manufacture in quantity of the hormones testosterone and progesterone.

Among his many "firsts" in the field of steroids was his synthesis of the drug physostigmine, used to treat glaucoma.

W. Lincoln Hawkins (1911-1992) was a pioneer in chemical engineering and the uses of plastics. He developed life extending additives in plastics as a practical means for conservation of materials. Hawkins' work led to the invention of the synergistic system of chemical stabilization used throughout the world in the manufacture of plastic cable sheath. His research was also of significance in developing ways to recycle plastic.

He studied chemistry at Rensselaer Polytechnic Institute, where he was one of only two African American students in the school in 1928.

Samuel P. Massie (1919-2005) was the first African American professor of chemistry at the U.S. Naval Academy, and the first to head its chemistry department.

The North Little Rock native worked on the Manhattan Project and his research led to the development of drugs to treat mental illness, malaria, meningitis, gonorrhea, herpes, and cancer.

His 1954 Chemical Reviews article, "The Chemistry of Phenothiazine," is considered a classic in the field.

Harold Amos (1919-2003) was the Maude and Lillian Presley Professor of Microbiology and Molecular Genetics at the Harvard Medical School, where he joined the faculty as an instructor in 1954 and became the first African American department chairman in 1968.

He was a Fulbright Scholar at the Pasteur Institute in Paris in 1951 and received the Dr. Charles Drew World Medical Prize in 1989.

Rhetaugh Graves Dumas (1938-2007) was the first woman, the first nurse, and the first African American to serve as deputy director of the National Institute of Mental Health.

She was also the first nurse to use the scientific method to study clinical nursing problems.

Shirley A. Jackson (1946-) was the first African American woman to earn a Ph.D. from the Massachusetts Institute of Technology (1973).

Currently, she serves as president of the Rensselaer Polytechnic Institute and has held senior leadership positions in government, industry, research, and academia.

Bernard A. Harris, Jr. (1956-) was the first African American to walk in space.

<http://encyclopediaofarkansas.net/>
<http://www.nasonline.org>
<http://www.fayar.net/>

Home Notes



Scott Morris and Jacqueline Greer

Grad Students Engaged

Graduate students **Jacqueline Greer** and **Scott Morris** are engaged. They plan to marry Sept. 3 in Nevada, Texas. Greer works under the direction of **Suresh Kumar** and Morris works under the direction of **Bob Gawley**.

Baby Shein

KZ Shein and his wife Thiri Zaw welcomed the birth of their daughter Maddy Zaw Shein Feb. 7, 2011.

Baby Maddy weighed five pounds and three ounces and was 18 inches long.



Maddy Zaw Shein

Back to Class

Administrative office supervisor and alumna **Heather Jorgensen**, B.A. '97, is pursuing a master's degree in higher education administration through the College of Education and Health Professions.

Major Renovation of the Hoods in the Research Wing

By Bill Durham

Over the past year Facilities Management has been attempting to improve the efficiency of the Chemistry and Biochemistry Research Building (CHBC) as part of a campus-wide energy reduction program.

The first obvious change was an alteration of the hoods in the labs. This involved changing the faces, window openings and, most importantly, the flow rate and the make-up air. It was a slow process with some significant bumps along the way.

Among the bumps was the discovery that the paint used on the metal retrofit parts dissolved in acetone. It was later discovered that the paint was resistant to acetone after it aged a few months. Recent tests indicate that acetone has no impact on the paint. It was also discovered that the fan belts used to drive the blowers failed prematurely because the pulleys used to reduce the airflow were too small. The small pulleys required the belts to bend excessively.

The next stage in the process is to replace all of the hood fans with stroboscopic fans similar to the large green units that are in the center of the roof of the Chemistry Building. In our case three stroboscopic fans are required. The three will service three banks of hoods; one on the south side of the building and two banks on the west side. The hood exhaust can be seen on the roof of CHBC from a distant vantage point. Work on the south-side fan began Feb. 17 with a forecast for good weather. The contractor estimates about two weeks per bank, working seven days a week, weather permitting.

The hoods and the building air handling system are linked together and complete balancing of the air handlers in the building will not be finalized until all of the fans are installed. However, once the first fan is installed the contractor will test the system thoroughly before proceeding to the next which will involve rooms CHBC 306 and 304 and all corresponding rooms below.

New Fulbright IT Tech

Sean O'Bryan joined the Fulbright IT Services team as a part-time Technical Service Assistant II. He started in December as part of a 160-hour internship through the Northwest Technical Institute (NTI). The partnership was such a success that he was hired part-time.

He assists in tech support calls, cases and on-going projects. During the winter break, he successfully assembled and tested new classroom equipment for upgrades in both SCEN and KIMP. His efforts helped to meet deadlines for this project while providing essential hands-on experience. As a result, he has quickly become oriented with staff, Fulbright College buildings and the methods used to troubleshoot and service equipment.

O'Bryan is a student in the network/computer technician program in the computer information systems department at NTI.

He is a graduate of Fayetteville High School. He is married and has a six-year-old son.



Sean O'Bryan

Calendar of Events

February

21..... Department seminar
28..... Department seminar

March

01..... Application deadline for students who plan to graduate spring 2011
01..... Deadline for all graduate students to submit a written research proposal to their committee
03..... Early progress grades e-mailed to students in 1000 and 2000 level courses
07..... No department seminar - Biophysical Society meeting
11..... CUME
14..... Department seminar
21..... No department seminar - Spring Break
21-24 Spring Break, no classes, university is open
25..... University closed
28..... No department seminar - ACS meeting

April

01..... CUME
01..... Last day to drop a full semester class or classes with a mark of "W"
04..... Department seminar
04-15 Priority registration for summer and fall
11..... Department seminar
15..... CUME
15..... Deadline for graduate students to orally defend proposal to committee
15..... Last day to make up incomplete marks from previous semester
18..... Department seminar
21..... Department Honors Night
25..... Department seminar

May

02..... Spring seminar series concludes
05..... Last day of spring classes
06..... Dead day, no classes
07-13 Final exams
14..... University commencement
22..... REU/INBRE summer programs begin

The above dates and events are listed on the department's Blackboard site
<https://learn.uark.edu/>

The department of chemistry and biochemistry at the University of Arkansas strives for excellence in research, teaching and service in chemistry — the central science.

We aspire to positions of leadership regarding the discovery of new scientific knowledge, the training of students, and the economic development of the State of Arkansas.

We seek to recruit and retain a diverse group of the best faculty, students and staff to address the challenges of the future through interdisciplinary and multidisciplinary research and education.

February Birthdays

02.....Elizabeth Srader
02.....Suresh Kumar
05.....Christena Nash
12.....Markeeta LeRay
15.....Barry Sharp
19.....Mya Norman
25.....Sasirekha Muruganatham
27.....Christian Loeschel

The publishing of birthdays is not intended to invade the privacy of anyone. If you prefer not to be included, please let us know.

Library Hours

CHBC Library (CHEM 225)
<http://libinfo.uark.edu/chemistry>

Monday - Thursday ...8 a.m. to 9 p.m.
Friday8 a.m. to 6 p.m.
SaturdayCLOSED
Sunday.....2 p.m. to 6 p.m.

CUMES

Cumulative exams for graduate students will be given on the following Fridays in CHEM 144 at 5 p.m. to 6 p.m.

- March 11
- April 1
- April 15

GRAD STUDENT REMINDER

The deadline for all graduate students to submit a written research proposal to their committee is March 1.

Forms must be signed and returned to Leslie Johnson following committee meetings.