AMRI NEWSLETTER

Advanced Materials Research Institute

Volume 14, Issue 4 **http://www.uno.edu/amri** **Dec 2016**

THE DIRECTOR'S CORNER

Greetings all. Mardi Gras season is gearing up and that means we are about to have our annual review. This will take place on Thursday, February 23, 2017 in the University Center, Innsbruck rooms A & B just before Mardi Gras break. The review will highlight research from all the AMRI research groups including those new faculty members that have just started this fall at UNO. We will also have one outside speaker, Neil Crews, the Director of LaTech. As usual, we will close out our program with poster presentations by our graduate and undergraduate student researchers.

We are looking towards summer. We are currently seeking a no-cost extension on the NSF REU grant and if approved, this will allow us to support 7 undergraduates over the summer. As far as the high school program, we have several funding sources that we will use and are also planning to start a crowding sourcing campaign to raise monies to support 5 high school students. I will be contacting you all in the near future as this program gets underway.

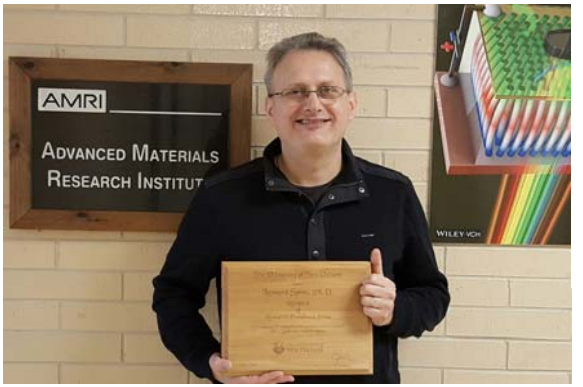
Congratulations to Matt Tarr for becoming the UNO VP of Research and Economic Development (Jan 2017). I think he is off to an excellent start and clearly has a strong vision as to where UNO should go in the next several years. Matt is already working with the Institutes and Centers to develop new and unique partnerships utilizing the talent we have on campus. I know that he will help AMRI as well as all institutes and centers to become stronger and better funded. He is already working to address important issues including new hires, startup packages, salary compression, equipment maintenance, and faculty retention.

Science building renovations appear to be almost complete. We are happy to report that the last rain showed no evidence of leaking in any of the labs, offices, classrooms or hallways. Also, the new hoods are fully functional and give excellent support to the research and teaching laboratories. Air handling throughout the building appears to be much better as well.

--John Wiley

Congratulations to Professor Leonard Spinu for Research In Excellence Prize

The University of New Orleans recently recognized Dr. Leonard Spinu as the 2016 winner of the Research Excellence Prize. This



Research Award is an acknowledgment for Professors who have distinguished themselves in their creative and scholarly activities. The prize consists of a $10,000 grant administered through the Office of Research.

Dr. Spinu joined UNO within the faculty of the Physics Department and AMRI in 2002 as an Assistant Professor, was promoted to Associate Professor in 2007 and promoted to the rank of Professor in 2012. He also served as the Director of AMRI from 2012-2015. Dr. Spinu is currently working as a Program Director of the National Facilities and Instrumentation Program at the National Science Foundation, Directorate for Mathematical and Physical Sciences, Division of Materials Research while maintaining an active research program at UNO with three doctoral students and three undergraduate students. With over 140 publications, many in top ranking journals, participation as an active reviewer for numerous organizations from grants to publications, and $15 million in research grant awards, Dr. Spinu is certainly an asset to AMRI and the UNO community in terms of enhancing student learning and promoting the scientific discipline.

Sincere Thanks

AMRI would like to sincerely thank Pierre Champagne for his recent generous financial donation to AMRI. Such donations are quite important to AMRI where this funding can be used to support important programs within the institute including high school student and teacher summer research, graduate travel to national conferences, printing costs for important publications, AMRI upkeep (instrumentation repairs, etc.), seminars, and other AMRI events. Pierre is a UNO alum obtaining his Bachelors of Science degree in Engineering in 1976. Currently he works for AT&T as a Loop Capacity Manager. He is extremely active in the UNO alumni activities and serves as the Alumni Association Liaison. In August 2015, Pierre, and his wife Cheryl (BS 1972), both received the President's Medallion for Distinguished Service for their extensive efforts pertaining to UNO alumni. Pierre asks that all UNO alumni stay in contact with UNO; you can register at https://www.unoalumni.com/.

Annual AMRI Mardi Gras Review Coming in February

The Annual AMRI Mardi Gras Review will take place on Thursday, February 23, 2017 from 8:00 am until 5:00 pm at the Innsbruck Suite at the University Center on campus. AMRI faculty, researchers and students will contribute to a day of oral presentations and poster session as an overview of the AMRI research and programs. Notable technical accomplishments and new scientific insights gained since the last review will be highlighted. There will be a social held during the poster session. No registration fee will be charged for this meeting.

Where are They Now?

Cecilia Carbo (BS Chemistry 2014) worked in both AMRI and Chemistry as an undergraduate researcher. Initially she worked in Prof.

Caruntu's lab as part of undergraduate research (CHEM3094) and then later with Prof. Wiley both for undergraduate research and the summer REU program (2013). Her efforts in the fabrication of nanopeapods resulted in co-authorship on 3 publications and 3 national conference presentations, one of which she presented at the Dallas National ACS Spring 2014. Currently, she Is in South Korea working as an English language teacher. In a recent educational program (see pictures), she ran an English Science Camp for a group of Korean 5th graders covering topics in Chemistry, Physics, and Biology. The image (left, Cecilia in the middle) shows the students working with non-Newtonian fluids. They also worked with on the growth of beautiful alum crystals in egg shells (right).

Survey

For those of you that have not yet had time to do so, we would appreciate your input. The survey should only take a few minutes. Also, at the end of the survey, you can include information that you would like to appear in the next newsletter – we would very much enjoy hearing from you. You can access the survey at:

http://neworleans.co1.qualtrics.com/jfe/form/SV_0MUWaN72QmXa0o5.

New Faces at AMRI

Winifred Unah joins Dr. Weilie Zhou's research group as an Undergraduate Lab Assistant. Her position is part of a 2016 P.U.R.S.U.E. (Privateer Undergraduate Research and Scholarly UNO Experience) award. She will be involved in research involving the characterization of nanomaterials.

AMRI in the News

http://www.theadvocate.com/new_orleans/news/education/article_3c0b3418-ebc5-11e6-b3be-639ea66e892e.html

http://www.uno.edu/campus-news/2017/Matt_Tarr_Selected_Vice_President_for_Research_and_Economic_Development.aspx

Recent Publications

J. Ahmed, V. V. Poltavets, J. Prakash, S. M. Alshehri, T. Ahamad, "Sol – Gel Synthesis, Structural Characterization and Bifunctional Catalytic Activity of Nanocrystalline Delafossite $CuGaO_2$ Particles," Journal of Alloys and Compounds, 688 (2016), 1157-1161. http://dx.doi.org/10.1016/j.jallcom.2016.07.017

P. Gao, J. Davis, V. V. Poltavets, T. Hogan, "The p-type $Mg_2Li_xSi_{0.4}Sn_{0.6}$ thermoelectric materials synthesized by a B_2O_3 encapsulation method using Li_2CO_3 as the doping agent," Journal of Materials Chemistry C,4 (2016), 929-934. http://dx.doi.org/10.1039/C5TC03692E

"From Tetrahedral to Octahedral Iron Coordination - Layer Compression in Topochemically-Prepared, FeLa2Ti3O10," Léa Gustin, Yoshiteru Hosaka, Cédric Tassel, Tomoko Aharen, Yuichi Shimakawa, Hiroshi

Kageyama, and John B. Wiley,* Inorg. Chem. 2016, 55, 11529.
DOI: 10.1021/acs.inorgchem.6b02071.

Recent Presentations

"Grafting and Polymerization on Perovskite-Based Nanosheets," Sara Akbarian-Tefaghi and John B. Wiley, 252nd ACS National Meeting, Philadelphia, PA, August 21-25, 2016.

"Facile Synthesis of Highly Dispersible Platinum Nanoparticles and Platinum@Hexaniobate Nanopeapods Using Microwave Heating," Clare Davis-Wheeler, Sara Akbarian-Tefaghi, Juana Reconco-Ramirez, and John B. Wiley, Materials Research Society, Boston, MA, Dec., 2016.

"Inorganic-organic hybrids: Rapid microwave synthesis of grafted layered perovskites and exfoliated nanosheets," Sara Akbarian-Tefaghi, Elaine T. Veiga, Guillaume Amand, and John B. Wiley, Solid State Chemistry of Inorganic Materials Symposium, 72nd Southwest Regional ACS Region Meeting, Galveston, TX, Nov. 11, 2016 (invited).

"Atomic Force Microscopy Characterization of Hexaniobate Nanocomposites," Treva T. Brown, Zachary L. Highland, Jayne C. Garno, and John B. Wiley, 43rd Annual Conference of the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE), Raleigh, North Carolina, Nov. 8-11, 2016. (Treva was an Advancing Science Conference Grant Awardee.)

Would you like to help support important AMRI programs and research?

Consider making a donation to the AMRI UNO Foundation account.

To donate, simply click on the link:
Https://www.unoalumni.com/cos-giving

AMRI NEWSLETTER

--a publication of the

Advanced Materials Research Institute,
College of Sciences,
University of New Orleans
New Orleans, LA 70148
Phone: (504) 280-6840 / Fax: (504) 280-3185
E-mail address: amri@uno.edu
www.uno.edu/amri
Compiled by: Jennifer T. Nguyen,
Program Manager