



**7th Annual Applied Polymer Technology
Extension Consortium Symposium**
Polymer Science Beyond the Academic Realm



Louisiana State University
Baton Rouge LA
November 02, 2019

Awesome Speakers at the Ends with an Awesome Speaker in the Middle!

The Organizers attracted three excellent keynote speakers: Dr. Young-Hye Na, Research Manager at IBM, Dr. Mike Yandrasits, Advanced Senior Specialist at 3M and Dave Clemons, Analytical Services, Quality and Continuous Improvement Manager at BASF.



Smart Membranes:

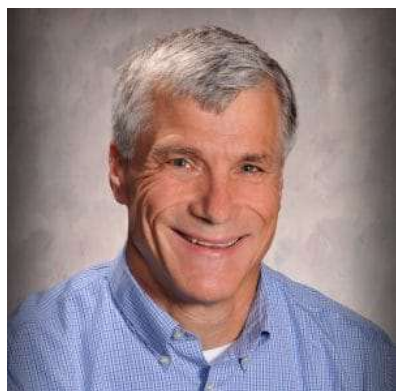
Dr. Na's discussion of "Functional Materials for Sustainable Water and Energy Applications" spoke to the contradictory goals of a having filter that removes residues (i.e., they have to stick to the filter) without fouling (i.e., the residue can't stick to the filter!). Dr. Na discussed IBM's use of Smart Materials AND High Performance Computing to thread this needle – oh, and you want antimicrobial activity too? Yeah, they have that.

Batteries!!!

And if you think Li-ion batteries are so 2010, Dr. Na and IBM are on the job. Attendees of the 7th APTEC Symposium are now ready for safe lithium metal batteries that can be manufactured in volume.

Hydrogen Fuel Cells Are Back!

If you want to use a hydrogen fuel cell to move electrons (outside the fuel cell) to and from the load, you have to make sure the protons move (inside the cell) to meet them. Keynote speaker Mike Yandrasits from 3M showed how proton conducting fluoropolymers can increase efficiency and energy output of hydrogen fuel cells.



To paraphrase "The Troggs"; "[Polymers are] all around!". That was the topic of the third keynote speaker, Mr. Dave A.

Clemons, Analytical Services and Quality Manager at BASF. And those of us who do bio-polymers know they're inside us too.



Dave Clemons of BASF

(ASIDE: One of the feedback forms suggested that three keynote speakers was too many – trust me; "too many" speakers of this quality is not even a thing !)

Let's Eat!

Among the wildly positive feedback from the previous (2018) APTEC Meeting was a confusing item: “food” was listed as “one thing I particularly liked” and “one thing I particularly disliked”. The 2019 Organizers were adamant that this would NOT happen again. So check out the menu:

BREAKFAST: Scrambled Eggs, Cheese Grits, Hash browns, Biscuits , Scones , Coffee

LUNCH: Jambalaya with Sausage & Chicken, Chicken Alfredo over Penne Pasta, Red Beans/Sausage & Side Pan of Rice, Crawfish Etouffee with side pan of rice, Ricotta Cheese Stuffed Shells in Marinara with side dishes: Potato Salad, Macaroni & Cheese, Spinach & Artichoke Dip and Dessert: Crème Cake Tray, Bread Pudding

NETWORKING SOCIAL SESSION: Ultra, Bud Light, Red & White Wine (for those of age :) with Bacon Wrapped Chicken, Boudin Eggrolls, Chicken Fingers, Brownies, Mississippi Mud Pie (for everyone!)



Where can you get that for \$30? And healthy servings of top drawer science as well!

Talks and POSTERS!

The quality of the oral and poster presentations was testified to in the uniformly positive feedback provided by attendees. And more proof is given by how hard the judges had to work to pick the winners of the prizes provided for best oral and poster presentations. Get this – the 1st, 2nd and 3rd place poster prizes were split among the three that TIED for best poster. That's an abundance of quality. Winners were:

Joshua Tropp

(University of Southeastern Mississippi)

“RII Track-2 FEC Emergent Polymer Sensing Technologies for Gulf Coast Water Quality Monitoring”,

Christopher Keller

(Tulane University)

“Effect of block length on the water dispersibility of SiO₂-poly(ϵ -caprolactone)-b-poly(oligo ethylene glycol methyl methacrylate mono-methyl ether) amphiphilic grafted nanoparticles”

and Jorge Belgodere

(Louisiana State University).

“Chemoselective Ligation of Thiolated Sodium Lignosulfonate”

The best oral talk was no easier, but the judges awarded the prize to:

Tianyi Yu

(Louisiana State University)

“Investigation of amphiphilic polypeptoid-functionalized halloysite nanotubes as stabilizer towards oil spill remediation”

ASIDE: Tianyi Yu is also our very first APTEC Ambassador (elsewhere in this newsletter).



APTEC's First Research Fellow – sponsored by Sekisui Specialty Chemicals

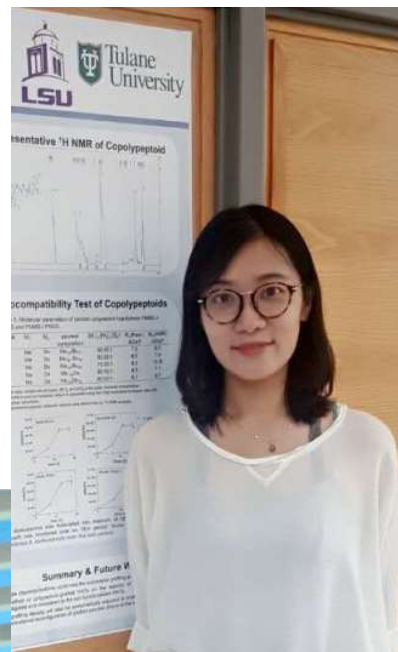
APTEC is proud to introduce our first APTEC/Sekisui Research Fellow, Dylan Gilbert of SLU (and now UNO). Dylan's work on this project was to use a single capillary viscometer to measure the viscosity of polyvinyl alcohol in various solvents, to use hydrodynamic volume to determine which solvents are better for these polymers. Dylan made modifications to the hardware, made measurements of viscosity, reported on those measurements to the client at Sekisui Specialty Chemicals and presented that work as a poster (below) at the APTEC meeting. Further presentations are planned as the project proceeds, including at the 94th Meeting of the Louisiana Academy of Science.



The Sekisui collaboration in front of the poster – from left: David Norwood (SLU), George Shitera (Sekisui), Dylan Gilbert (SLU), Brittany Trinh (Sekisui) and Brad Wurm (Sekisui).

APTEC Ambassador

To further our mission of education and outreach in polymer science, APTEC announces a new designation, APTEC Ambassador. Ambassadors are chosen for exceptional abilities to communicate to general and scientific audiences some combination of top-flight research, service to the community, or teaching. Our first APTEC Ambassador is Tianyi Yu of Louisiana State University. On FRIDAY, 08 NOV 2019, Tianyi gave a Polymer Communication Seminar at Georgia Tech. As she won “Best Oral Presentation” (see above) we can be confident that LSU and APTEC were well represented.



Meet the Organizers:



The organizers take a quick selfie during the Networking Social Reception. From left are Jingya Xiao, Matthew Jordan and Subarna Kole. Those in the know understand that when a conference runs this well, there was a LOT of work before and during. Jingya, Matt and Subarna set a high bar for conference planning.

Feedback and Ballot:

Feedback/ballot forms were passed out again, and again only a fraction were returned. But those that came back were overwhelming, with more than 98% of observations being positive. One legitimate complaint was that the poster size specified in the advice to presenters did NOT fit the poster backdrop at the venue. We'll keep an eye on that. One thing they particularly disliked? “This paper survey”.

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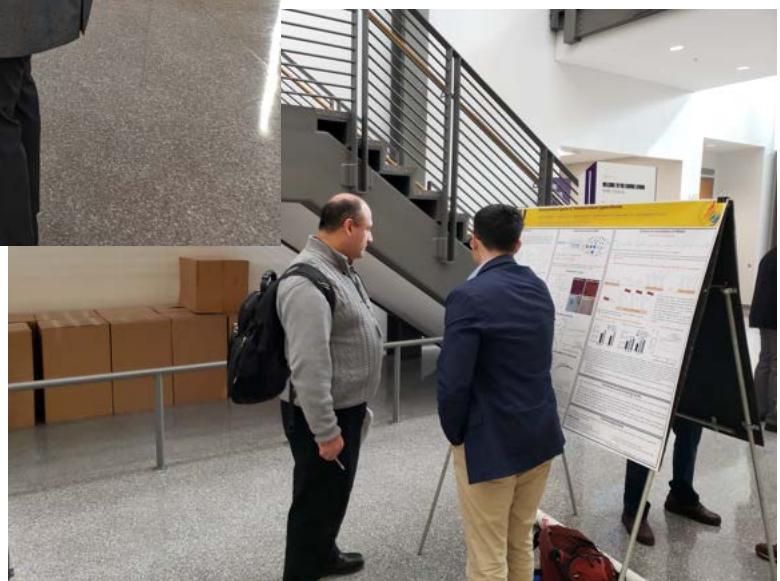
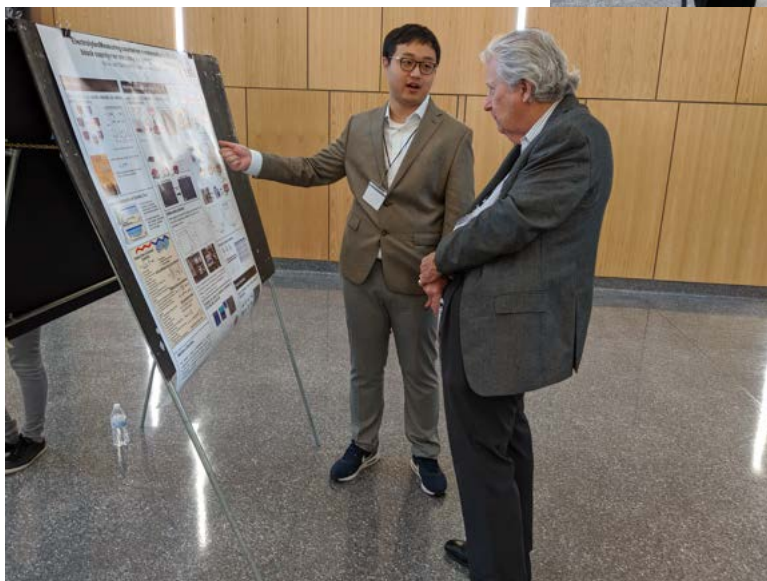
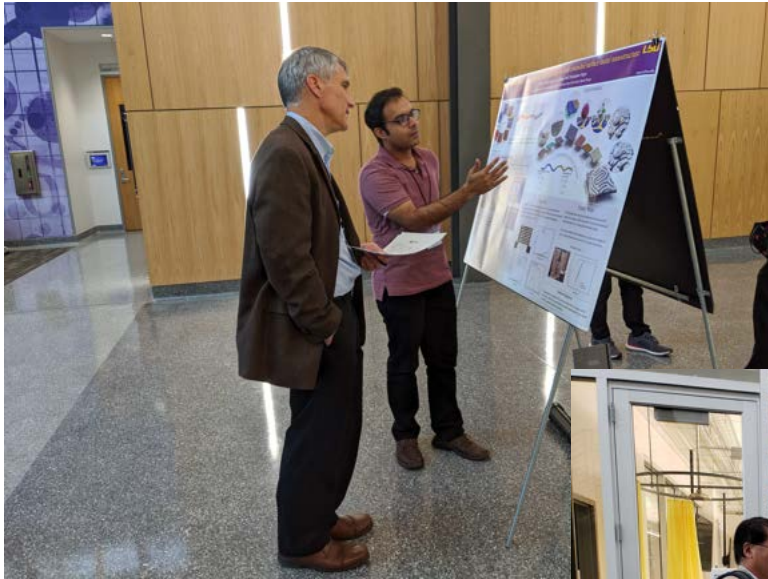
One commenter said that they “would love to have it in NOLA”. Your wish is granted – next year's APTEC conference will be hosted by Tulane University (which happens to be in New Orleans LA :)

Networking Mixer

The conference ended with a Networking Social Mixer with beer and wine (IDs were checked:~) and warm snacks (Bacon Wrapped Chicken, Boudin Eggrolls, Chicken Fingers) and dessert (Brownies and Mississippi Mud Pie).



Judging Posters (“Judge not lest ye be judges”)



“Relax – just act natural”

