

MRS University Chapter at NDSU Wins 2005 “Chapter Challenge”

The MRS University Chapter at North Dakota State University (NDSU) won the Materials Research Society Chapter Challenge 2005. In September 2004, MRS introduced the challenge in order to spark a little “friendly competition” among its university chapters. The chapter members were to design and carry out a creative program or activity that relates to the theme “Sustainability in Materials Science and Engineering.”

The chapter members at NDSU focused on the “Role of Materials in Alternative Energy Sources” and took their message to people of different educational levels. Through activities ranging from panel discussions in the university to a booth at the mall, members of the chapter discussed materials issues surrounding their topic.

The chapter held a panel discussion on March 10 at the NDSU campus in which a group of experts addressed the topic “In Search of Alternative Energy Sources: Technological, Environmental, and Economic Perspectives.” Addressing an audience of university students, faculty, staff, and members from other organizations, Bor Jang (Department of Mechanical Engineering) gave a general overview of the concern for alternative energy sources and where research is heading. Rajesh Kavasseri (Electrical Engineering) and Radu Danescu (Mechanical Engineering) talked about the possibilities and potential problems of using wind as a source of energy—an attractive alternative for North Dakota. While Eakalak Khan (Environmental Engineering) laid out environmental issues and how researchers are approaching them, Chiwon Lee (Plant Science) acquainted the audience with biomass. Lee explained how some of the grasses they see around them could serve as an alternative source of energy. Cole Gustafson from the Department of Agro-Economics captured the audience’s attention when he summarized the investment policies of the governments of different states on various alternative energy sources.

The emphasis on wind energy by the people of North Dakota became obvious in a survey the chapter conducted at the West Acres Shopping Mall in Fargo on March 26. When asked what type of energy they would like to see increase in use, most of the 80 participants said wind. The next favorite was hydro energy, then solar and fuel cells, with municipal waste chosen by only a few of the participants. The majority of those surveyed said renewable energy sources should receive the highest research priority, and they were willing to pay for it if necessary.

The NDSU chapter also staffed a booth



◀ Visualization of an alternative energy world. Courtesy: Tricia Porter, South High School, Fargo, ND.

▼ The NDSU MRS University Chapter team with the science teacher, Lois Ewertz (second from right), at North High School in Fargo.



▲ MRS University Chapter president Pijush Ghosh talks to one of the visitors at the booth in the West Acres Shopping Mall in Fargo.

◀ NDSU MRS University Chapter member Devendra Verma (second from left) describes to a faculty member how fuel cells work.

at the mall that day, equipped with posters, flyers, and models. The chapter chose to do outreach at the mall in order to reach a cross section of the community. The goal was to create awareness among members of the public about the possible scarcity of conventional fuel sources or fossil fuel in the near future and to acquaint the public with the thoughts, ideas, and efforts of scientists and engineers in meeting this challenge.

The university chapter also designed activities for high school students. At South High School in Fargo, the chapter held a drawing contest on March 15–30 on the “Visualization of the Alternative Energy World.” The chapter wanted to see how the upcoming generation would like to see the new world under the umbrella of alternative energy sources. The students were given a choice of two scenarios: (1) how day-to-day life would look with new energy sources such as solar or wind and (2) how the day would look if suddenly all of

the existing energy sources were depleted. Prizes were given to the two best drawings.

Members of the chapter also provided an hour-long program at South High and at North High School, engaging the students in hands-on demonstrations. The chapter members gave a small presentation on materials evolution, demonstrating a few properties such as smart materials and corn starch in water. The members explained the difference between fossil and non-fossil fuels and the role of engineers in promoting the technology and application of the latter.

The chapter provided a report on its project for the Chapter Challenge, which can be accessed at www.mrs.org/university/.

Upon hearing the news that the NDSU University Chapter won the challenge, chapter president Pijush Ghosh said, “Thank you so much and we are glad that we have made it. Credit goes to all the chapter members; they have worked hard with all enthusiasm and sincerity and made this a success.”

MRS University Chapter at WSU Holds Poetry Contest on Materials

The Materials Research Society University Chapter at Washington State University held a materials-related poetry contest last spring. Students, faculty, and staff members associated with the university's School of Mechanical and Materials Engineering (MME) were eligible to submit up to three poems to the contest. The chapter offered three categories: "Why I Want an MME Degree," "Engineering Homework," and "Material Properties."

Entries from students were judged separately from entries by faculty and staff members. The winning poems were displayed in the engineering building.

Among the students, **John Yeager** (Materials Science and Engineering Department) took first place in two categories: "Why I Want an MME Degree" and "Material Properties." He received \$50.00 for each category, donated by Hi-Rel Labs.

John Winterstein (MSE) received first place for "Engineering Homework" and received a calculator, donated by Gene Jones HP, Vancouver.

Second and third place were awarded in the category of "Material Properties." **Coralee McCarter** (Materials Science) received second place, acquiring an MRS proceedings volume donated by MRS. Third place went to **Molly Kennedy** (Materials Science); she received an MRS long-sleeved club t-shirt.

In the faculty and staff division, **Mary Simonson** (MME) received \$50.00 for first place, donated by the MRS Club, in the category "Why I Want an MME Degree"; and **Annette Cavalieri** (MME) received a Bookie gift bag, donated by Bookie, for first place in the category "Engineering Homework."

In the category of "Material Properties," three prizes were awarded. MRS donated a proceedings volume for first place to **David Field** (MME) and an MRS long-sleeve club t-shirt for second place to **Mary Simonson** and for third place to **Annette Cavalieri**.

Three of the winning poems are reproduced here. All of the winning poems can be accessed on the WSU Web site at www.cub.wsu.edu/wsumrs/.



Student-First Place

Category: *Why I Want an MME Degree*

Why I Want an MME Degree

John Yeager

Why would I want an MME degree
When I could be a writer or an attorney?
Is it only the money? Is it only the fact
That there's great job security? No, far more than that!
Not that other majors don't stand up to the test
It's just MME's better than all of the rest

I could not imagine becoming a vet
A doctor, a nurse, any of that set
Biology scares the heck out of me
I know nothing about pathology
To be quite honest I'm put off by drugs
All people *need* are a couple good hugs!

And how could I ever major in art
Producing great works like the Technicolor Heart?
I have neither the skill nor the passion required
To spend fifteen hours painting a fire
Or making a fresco look, well, *just so*
So elitists can feel that they're in the know

As for MME above all the rest
Of engineering disciplines (which are the best)
I can only make one certain thing clear
I have no interest in finding the shear
Or other stresses involved in building a road
A bridge, or anything supporting a load

I could not program to save my own life
And electrical theory always gives me strife
Chemical engineers are just way far out
I like to be grounded while having no doubt
That my profession will pay me quite well
Without undergrad school seeming like hell

So give me phase diagrams, TTT curves
Even transistors, I've got the nerves
Grain growth, kinetics, dynamics, the lot
Brinell hardness testing gets me all hot
I want to know how to make things people use
Products that stand up to daily abuse

In short, MME is the only sane way
For me to enjoy college, day after day
I won't need recognition for what I design
All that I need is some small peace of mind
Knowing that I've got a useful degree
That's zero parts bull-crap and one hundred parts "me"



Faculty-First Place

Category: *Engineering Homework*

Homework Haiku

Annette Cavalieri

Headache from homework
Picture graduation day
Math, more math, oh my



Faculty-First Place

Category: *Material Properties*

The Saga of Alumin'ium

D.P. Field

It was Sir Humphrey Davy, with black hair, and wavy, that first caused all of the fuss,
He found a new metal, light as a rose petal, and then threw us into the muss.
Aluminum was the word, (but it sounded absurd) that he used for naming the stuff,
But it was too hard to say, so abruptly one day, he said that word was a bluff.

There should be an "n", 'twixt the "i" and the "m," he stated with sadistic glee,
So "aluminum" was born, amid shame and scorn, and against the purists' plea.
"An element so fine, should not cross the line, and fail to use our dear '-ium.'
Just look at our others, like well-named brothers, chrom-ium, magnes-ium, sod-ium..."

And soon after that, while tipping his hat, Sir Humphrey made news once again,
This new stuff we'll call, alumin-ium after all, regardless of what we said then.
'Cause any old bum, who's seen this alum, knows making that metal is tough,
And nobody will care, for it's hardly even there (though the sound is still rather rough).

Yet as fate sings its song, Hall and Herault came along, and made the stuff easy to cook,
Now it's common as dirt, like cloth for a shirt, and you'll find it in any ol' nook.
But the American tongue, both old and young, can scarcely pronounce the new "i"
So "aluminum" we'll say, 'till our dying day, regardless of what others cry.

It appears that all others, stick to their druthers, and aluminium is all they will say,
"For it just seems right, like day and night, to say 'ium' even today."
Now both sides suggest, that their word is the best, but tolerance exists at both ends,
And somehow it appears, that through all these years, we've managed to still
remain friends.

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