

# The Adventures of Meg A. Mole, Future Chemist

## Dr. Stan Whittingham



**I**n honor of this year's National Chemistry Week theme, "Marvelous Metals," I traveled all the way to The State University of New York at Binghamton (SUNY) to meet Dr. Stan Whittingham, Distinguished Professor of Chemistry and Materials Science & Engineering, and inventor of lithium batteries!

As soon as I arrived, I could not wait to learn more. I first asked Dr. Whittingham to tell me about the work he does with batteries. He explained, "I make new batteries that might be used in your phone or in cars that will make them last longer or go further before you need to plug them in." He explained, "You would not have a smartphone without the batteries we invented." I thought, how neat! I could not wait to learn more about his work and what made him decide to be a scientist.

Dr. Whittingham told me that he was very interested in science when he was growing up. I asked him to tell me more about what types of science experiments he did at school and home. He told me that he and his fellow students "made new chemicals and did new experiments each week in both chemistry and physics labs." He credits his decision to go into science to two teachers. "I had two outstanding science teachers at Stamford School in Lincolnshire, England: Major Lamb, who taught chemistry, and Squibbs Bowman, who taught physics. They were excited about science and passed that on to me," he added. I am quite sure this is why he told me his two favorite subjects in school were chemistry and physics.

After graduating from Oxford with his doctorate, Dr. Whittingham "went to Stanford University to do research in the Materials Department." He was able to "lead the group there for the next couple of years" and learned a lot about "materials for energy applications — which is beginning to be a hot area of science." Specifically, he said, "we were looking into the question of how fast ions move in solids, which got me involved in energy storage and production." He then moved to a position at Exxon Research & Engineering Company, where the lithium battery was invented.

Although he enjoyed the work, Dr. Whittingham told me that "after spending more than 15 great years in industry, I yearned to get back to doing research and working with enthusiastic young minds. A new batch comes in every year, so I become rejuvenated too. I was excited to bring what I had learned in industry to the classroom and the lab." He enjoyed bringing the "real world" into the curriculum.

As a professor at SUNY, Dr. Whittingham said he enjoys "working with young inquisitive students" the most. As a scientist, he explained, the best thing is that "you do new challenging things every day; you get to meet with a lot of people, and you get to travel around the world." He further explained that he "would not be still around if science did not still excite me and present a challenge."

I really enjoyed my trip to New York to visit Dr. Whittingham. His invention of lithium batteries is definitely the perfect fit for National Chemistry Week's "Marvelous Metals!"

### Personal Profile

#### Favorite pastime/hobby?

Seeing new places

#### Accomplishment you are proud of?

Invention of the lithium battery

**Birthdate?** December 22



### Word Search

Try to find the words listed below — they can be horizontal, vertical, or diagonal, and read either forward or backward.

M	X	N	J	C	T	F	U	O	R	A	N	N	B	H
D	O	D	I	O	L	L	A	T	E	M	O	U	E	T
N	N	T	C	L	B	M	V	M	H	V	R	C	T	E
C	U	U	A	X	W	Y	B	B	V	Z	T	L	C	O
O	I	U	O	S	S	H	C	C	H	O	C	E	E	J
F	Y	Z	L	P	Q	X	O	S	L	E	E	U	D	U
J	L	H	K	J	M	N	X	T	V	L	L	S	A	R
M	O	E	V	Z	D	O	R	A	A	D	E	Q	G	M
Z	I	F	R	U	P	Q	C	T	L	P	Y	N	A	N
E	L	N	C	S	E	L	E	M	E	N	T	G	T	O
L	A	T	E	M	G	M	I	Y	L	G	N	K	A	I
U	O	T	N	R	N	Q	A	B	X	E	Z	Y	U	I
R	C	O	D	O	A	B	V	V	T	D	V	N	Z	F
D	J	V	N	C	P	L	T	I	U	A	C	Q	A	D
S	D	R	Z	A	W	T	K	B	C	J	W	B	I	D

ATOM	ELECTRON	MAGNET	MINERAL
COMPOUND	ELEMENT	METAL	NONMETAL
CONDUCTOR	ION	METALLOID	NUCLEUS

For answers to the word search, please visit the *Celebrating Chemistry* Archive at [www.acs.org/ncw](http://www.acs.org/ncw).