Meet the Scientist!

A materials engineer develops and improves materials that you use in your everyday life by understanding and altering the microstructure of materials.

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http://www.naturalinquirer.org

http://www.scienceinvestigator.org

Important Scientist Characteristics

People forget that scientists not only need to find and discover new ideas, but they need to communicate the ideas to other scientists and the public. I spend most of my working time writing technical articles that will get published in peer-reviewed journals.

Example of a simple research question I have tried to answer:

Where does water go in wood when wood gets wet? Bad things happen to wood when it gets wet (mold, decay, etc.). I am developing models of how water changes the wood's microstructure, which is the smallest level of a material's structure that we can see. This could help improve wood.

Technology or equipment used in research:

Materials engineers understand the microstructure of materials by using different types of microscopy. Scanning electron microscopy (SEM) allows us to see things that are even too small to see in common light microscopes.

Most Exciting Discovery

Recently, my colleagues and I discovered a link between a moisture-generated mechanical softening of wood and the movement of chemicals and ions through the wood. We believe that these related phenomena may be connected to the onset of wood damage.

When did you know you wanted to be a scientist?

I didn't have a single moment that I knew I wanted to be a scientist. But, my 6th grade teacher and high school chemistry teacher challenged me to go above and beyond. What I do now doesn't relate to those classes, but the lessons I learned still fuels my passion.

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