

MRS makes an effort to lower the barriers that may prevent our community from engaging in public and science outreach.



Science outreach: Engaging the next generation

Oliver Kraft
2015 MRS President

We all remember being a child and having an “Aha! experience” when we figured out how something works. Even now, as scientists, we still love to have the Aha! experience, and we should give our children the opportunity to learn how satisfying it is to figure things out themselves. Maybe this passion will remain with them throughout their lives.

We clearly recognize the importance of science outreach and agree that it is critically important for our future that the next generation takes an interest in science. How often did you think, “Yes, I should do something,” but didn’t know how to engage or where to start? It is my hope that MRS can lower the barriers that may prevent you, as an MRS member, as well as the broader materials community from engaging in science outreach with the next generation.

So here is a primer from MRS—three ways to help get you engaged:

Don’t know where to start?

The good news is you don’t have to start from scratch. MRS’s *Science Enthusiast* web page (www.mrs.org/science-enthusiasts) has a collection of ready-made demonstrations and modules available for your use. Here are just a few examples of what you’ll find there, and how you might incorporate them into your personal outreach efforts.

- Use online games to teach children about science. *Strange Matter* (the MRS traveling museum exhibit) includes an interactive website (www.strangematterexhibit.com) that allows kids to explore materials they see all the time. Created by some of our own practicing scientists and educators, “the site’s science is presented in an interactive and exciting format that is fun and educational for anyone who should land on the site, young or old.”* *What’s This Stuff?* (NOVA) challenges users to identify 10 mystery materials. And *Dragonfly TV—Nanosphere* (PBS Kids) can be used to explore nanoscience.
- Give a demonstration to a local group of children. The *NISE Network* website (www.nisenet.org) connects you to demonstrations on nanoscience as well as a video seminar covering best tools, tips, and tricks for sharing science. The Materials Research Science and Engineering Center website will connect you to industry and university outreach programs.
- Organize a field trip to your local science center. *Find a Science Center* (ASTC) can help connect you to more than 400 science centers worldwide. *Strange Matter: Where Can I Find It?* is available on the MRS website and provides current/upcoming locations of MRS’s traveling science exhibition.

Have an idea for a new program?

MRS can help fund your outreach efforts. The **Materials Research Society Foundation** (www.mrs.org/foundation) provides MRS members with grants to create and implement new programs.



A few recent efforts funded by the Foundation include:

- *Hagamos con-Ciencia (Let's Make Conscience with Science)*
Outreach to fifth and sixth grade students in rural areas of Mexico; Cinvestav-Saltillo
- *Polycraft: Educational Innovation through Gaming*
Demonstrations of polymer chemistry and materials science using the online game Minecraft; The University of Texas at Dallas
- *Mucus, It's Snot What You Think—The Video*
Video about the amazing properties of mucus, a unique biomaterial; Kungliga Tekniska Högskolan
- *Would You Agree to Have Perovskite-Based Photovoltaic Cells*
Module on sustainable energy for Arabic teachers and students in Israeli high schools; Weizmann Institute of Science
- *Fostering Environmental Consciousness in Classrooms through Sustainable Materials and Biopolymers*
Modules for teachers in elementary and middle schools; Bowling Green University
- *Materials Outreach for Rural Education*
Hands-on science lessons for rural middle schools in the state of Tennessee; Vanderbilt University
- *Science Saturdays*
Science workshops for high school students in the Philadelphia area; Drexel University
- *Materials Touch*
Project designed to enable visually disabled children and adults to experience materials science in a safe learning environment; Rice University
- *Ask a Scientist*
Outreach events that will involve volunteer scientists from the community participating in public scientific demonstrations; Ask a Scientist Corporation

Want to make a big impact locally and globally?

MRS has established a network of materials researchers, science museum exhibit designers, and science educators across three continents to create a new museum exhibit focused on sustainability—**Strange Matter Green Earth** (www.mrs.org/strange-matter-green-earth). This pioneering, educational venture will enable millions of people across the globe to explore ways in which advances in materials can lead to a more sustainable future. If this sounds interesting to you, consider volunteering to help the MRS Public Outreach Committee (www.mrs.org/public-outreach-committee) create highly interactive exhibitions and multicultural community programs to educate children on new materials and new technologies needed to address sustainability challenges.

So whether you are just getting started or you would like to make a bigger impact, please consider taking action, individually or through one of the programs available from MRS. Your efforts will make a difference!

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* *The Washington Times*, September 2003.



**MATERIALS RESEARCH SOCIETY
FOUNDATION**

Learn more about the Materials Research Society Foundation... or donate today, and help us support and expand our outreach efforts. Our future scientists will thank you for it!

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The Materials Research Society has been included as an eligible organization on the **2015 Combined Federal Campaign (CFC)** national list. The CFC is the annual workplace fundraising drive conducted by federal employees and military personnel each fall, which raises millions of dollars benefiting thousands of nonprofit charities.

Your donation will be directed to the Materials Research Society Foundation by using CFC identification number 51015.

Thanks to all who contribute through this campaign!

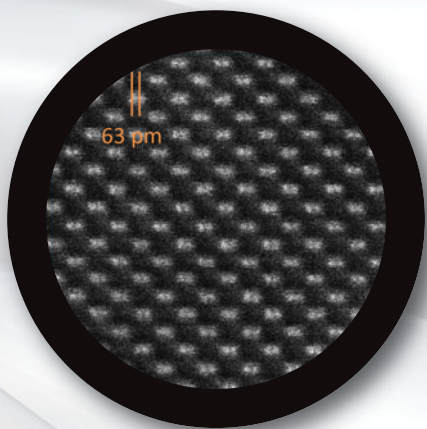
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