

# 2018 ANNUAL REPORT



The  
American  
Ceramic  
Society  
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**CERAMIC AND GLASS** INDUSTRY  
FOUNDATION

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**"Wow!! I BEGAN UTILIZING THE KIT YOU SENT TO ME. I HAVE BEEN TEACHING FOR 15 YEARS AND THE LAB INVOLVING THE REFRACTORY BRICK AND CONDUCTION IS ONE OF THE BEST LESSONS I'VE USED TO DATE. THANKS SO MUCH FOR YOUR GIFT!"**

THOMAS SAVAGE,  
HENDERSON COUNTY EARLY COLLEGE,  
FLAT ROCK, NC



## MESSAGE FROM THE BOARD OF TRUSTEES CHAIR, RICHARD FEESER



students all over the world to ceramic and glass science.

As Chair of The Ceramic and Glass Industry Foundation, I want to thank all the donors and volunteers who have contributed to the success of the CGIF this past year! With the help of ceramic and glass professionals like you, we have been able to support a number of programs to introduce

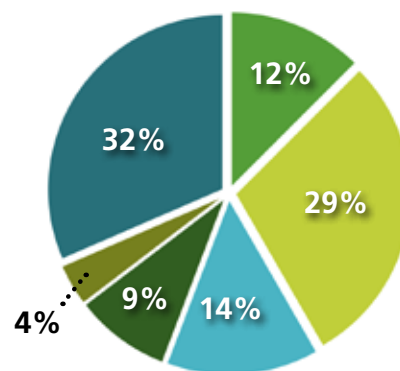
These programs take different forms, but the common thread is sharing ceramic and glass science knowledge with middle school, high school, and university students, and letting them know about the tremendous career opportunities in our field. We are an industry of the future, and together we continue to push the limits of what ceramic and glass materials can do to meet the needs of technology growth. I hope you will continue to support the work of the CGIF in 2019 and beyond.

Richard Feeser  
Chair, The Ceramic and Glass Industry Foundation

### 2018 FUNDING SOURCES

|                                |           |
|--------------------------------|-----------|
| Program Revenue                | \$55,000  |
| Individuals                    | \$129,000 |
| Foundations                    | \$62,000  |
| Corporations                   | \$39,000  |
| Endowment Fund Distributions   | \$17,000  |
| Donations to ACerS Award Funds | \$139,000 |

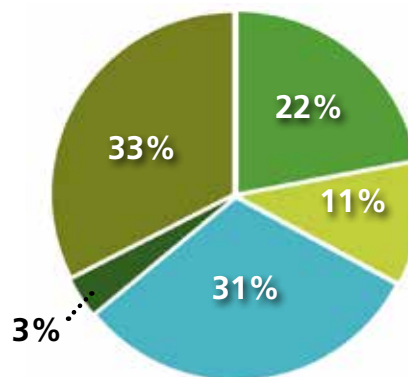
**Total Funding** **\$441,000**



### 2018 PROGRAM EXPENSES

|                                       |          |
|---------------------------------------|----------|
| Student Exchanges and Travel Grants   | \$63,000 |
| Student Leadership Development        | \$31,000 |
| Student & Educator Outreach           | \$89,000 |
| University-Industry Network / Keramos | \$10,000 |
| External Project Grants               | \$93,000 |

**Total Program Expenses** **\$286,000**



The American Ceramic Society continues to provide generous financial and in-kind support for The Ceramic and Glass Industry Foundation. ACerS ongoing support means that donor gifts to the CGIF are only used for outreach efforts to attract, inspire, and train the next generation of ceramic and glass professionals.





*"I WAS DELIGHTED THAT PATRICK HENRY HIGH SCHOOL WAS CHOSEN AS A RECIPIENT OF THE CGIF'S MATERIALS SCIENCE CLASSROOM KIT. I HAVE SHOWN IT TO ALL OF THE TEACHERS IN OUR SCIENCE DEPARTMENT AND OUR PHYSICS TEACHER RECENTLY USED THE CANDY FIBER PULL LESSON. HE WAS VERY IMPRESSED WITH THE DETAIL AND DEPTH OF THE LESSON MATERIALS AND THE STUDENTS ESPECIALLY ENJOYED THIS ACTIVITY BECAUSE IT INVOLVED EVERY STUDENT. IT IS VERY HELPFUL TO US TO HAVE ALL OF THE MATERIALS AND CONTENT SUPPORT (TEACHER AND STUDENT SHEETS WITH BACKGROUND INFORMATION AND EXTENSION IDEAS) WE NEED PROVIDED FOR THESE INTERACTIVE ACTIVITIES."*

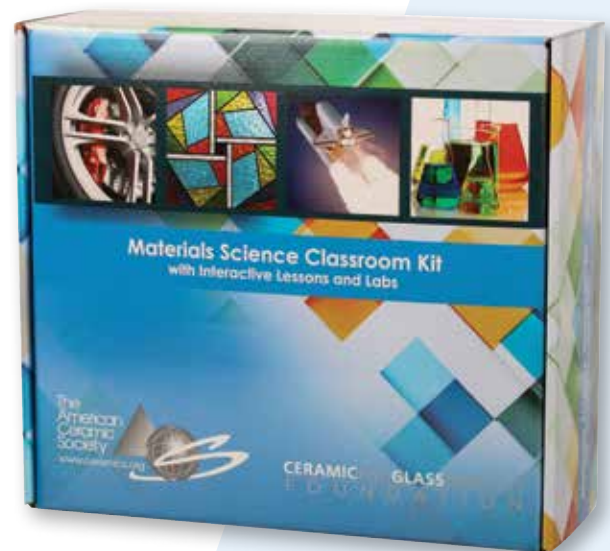
*PEGGY WHITLOCK, SCIENCE DEPARTMENT CHAIR  
PARTICLE HENRY HIGH SCHOOL, ASHLAND, VA.*

## PROGRAM HIGHLIGHTS FROM 2018

The Ceramic and Glass Industry Foundation stayed true to its mission in 2018 to attract, inspire, and train the next generation of ceramic and glass professionals through a number of programs.

- **Materials Science Classroom Kit:** 225 kits were distributed throughout the United States and abroad.
- **Student Travel Grants:** 10 students received financial assistance to attend the European Ceramic Society's Summer School in Hasselt, Belgium.
- **Student Outreach and Exchanges:** The CGIF hosted 50 university students from around the world at Winter Workshop 2018, held in conjunction with the 42<sup>nd</sup> International Conference and Exposition on Advanced Ceramics and Composites in Daytona Beach, Fla.
- **Student and Teacher Outreach:** Exhibited and demonstrated materials science at the 2018 USA Science and Engineering Festival in Washington, D.C.
- **Student Leadership Development and Outreach:** PCSA students demonstrated ceramic and glass-oriented labs for middle and high school students for two days at MS&T2018 in Columbus, Ohio
- **External Grants for Student Outreach:** Provided over \$87,000 to 12 recipients.
- **Keramos Collaboration:** 14 university-based Keramos chapters were offered funding to perform outreach activities on campus and to younger students in the community.

- **Teacher Workshop:** Provided a free one-day materials science workshop for teachers with co-sponsor HarbisonWalker International; 21 teachers from 19 high schools participated.
- **National Science Foundation Award:** Received a \$500,000 grant to support a three-year international research experience with project partners Penn State University and Kiel University in Germany.



The Materials Science Classroom Kit facilitates learning and inspires students to pursue further studies in materials science. Fun, hands-on lessons and activities introduce middle and high school students to the basic classes of materials: ceramics, composites, metals, and polymers. The Materials Science Classroom Kit complies with Next Generation Science Standards and is highly regarded as the best of its kind.

## TEACHERS RECEIVE HANDS-ON EXPERIENCE AT MATERIALS SCIENCE WORKSHOP

The Ceramic and Glass Industry Foundation, in partnership with HarbisonWalker International (HWI), hosted a free one-day event, Materials Science Workshop for Teachers at HWI's Advanced Technology & Research Center in West Mifflin, Pa., in August 2018.

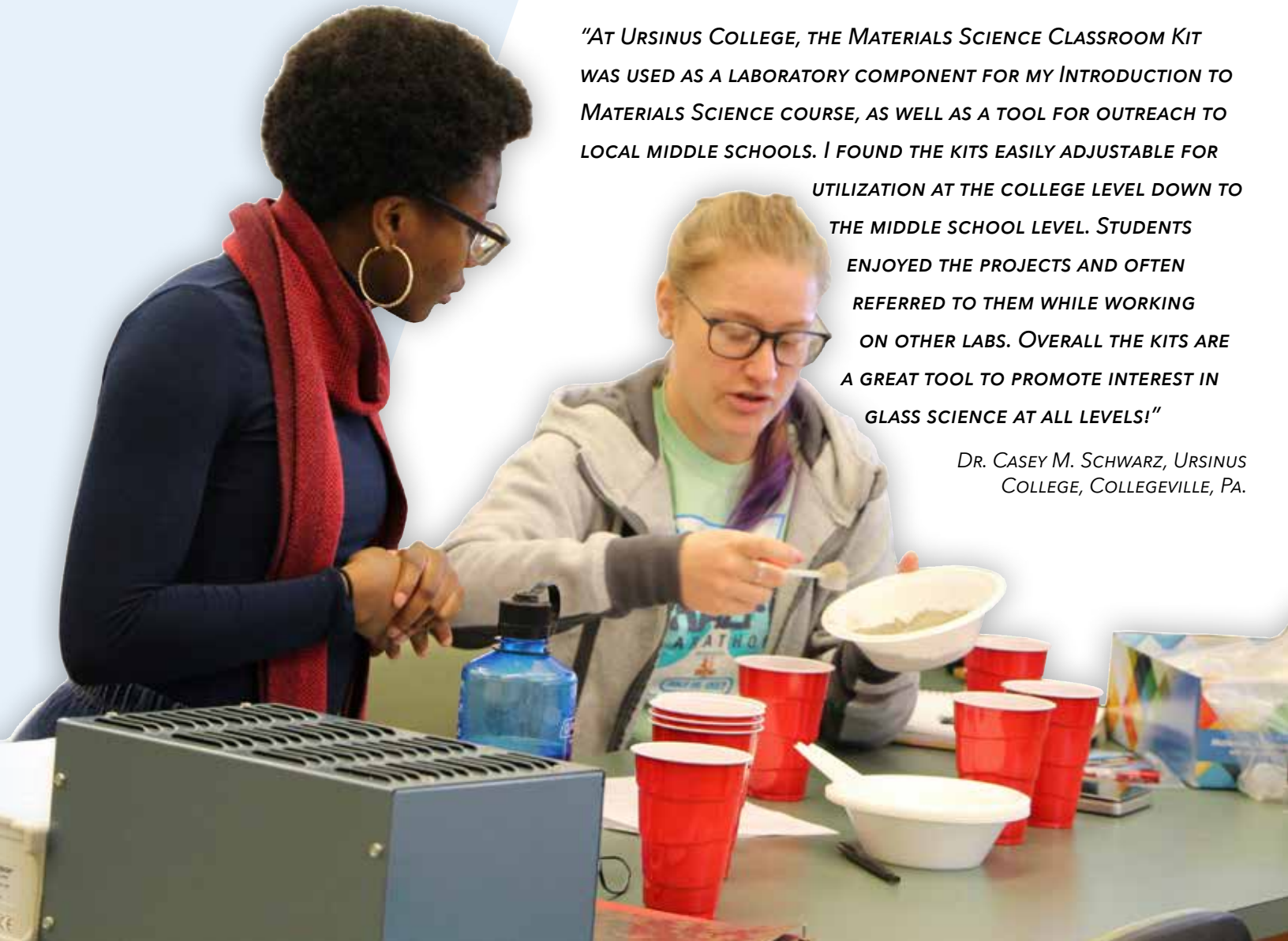


A total of 21 teachers from 19 high schools in Pennsylvania and West Virginia were in attendance. The workshop was designed to help teachers of 7<sup>th</sup> through 12<sup>th</sup> grades bring materials science education into their classrooms through the use of the CGIF's Materials Science Classroom Kit. The kit makes materials science concepts relevant, interesting, and fun for young adults, and the hands-on demonstrations and labs are a proven way of getting students interested in subject matter that they will need to know as they prepare to enter the high-tech workforce of today. Each workshop participant received a Materials Science Classroom Kit and *The Magic of Ceramics* book (\$250 value), sponsored by the HarbisonWalker International Foundation.

*The Ceramic and Glass Industry Foundation and The American Ceramic Society gratefully acknowledge all who made donations in 2017. We are thankful that your generosity enables us to make a difference in the lives of others and to attract, inspire, and train the next generation of ceramic and glass professionals!*

***"AT URSINUS COLLEGE, THE MATERIALS SCIENCE CLASSROOM KIT WAS USED AS A LABORATORY COMPONENT FOR MY INTRODUCTION TO MATERIALS SCIENCE COURSE, AS WELL AS A TOOL FOR OUTREACH TO LOCAL MIDDLE SCHOOLS. I FOUND THE KITS EASILY ADJUSTABLE FOR UTILIZATION AT THE COLLEGE LEVEL DOWN TO THE MIDDLE SCHOOL LEVEL. STUDENTS ENJOYED THE PROJECTS AND OFTEN REFERRED TO THEM WHILE WORKING ON OTHER LABS. OVERALL THE KITS ARE A GREAT TOOL TO PROMOTE INTEREST IN GLASS SCIENCE AT ALL LEVELS!"***

**DR. CASEY M. SCHWARZ, URSINUS COLLEGE, COLLEGEVILLE, PA.**



## CGIF SUPPORTS EARLY STUDENT RESEARCH

The Science Research Institute (SRI) at Conrad Weiser High School in Robeson, Pa., is a focused and challenging research experience in a cutting-edge science laboratory. The program provides students with a unique research curriculum in materials, biomedical, genetic, agricultural, animal, and environmental science.

Participating students have the opportunity to attend expert presentations from current Master/Ph.D.-level researchers and business/industry leaders. Students have access to state-of-the-art equipment to prepare for independent research/product design and application.

SRI students are doing college-level research, thanks to science teacher Adelle Schade, who started the Science Research Institute, a nonprofit organization that will benefit not only Conrad Weiser's students, but all students in Berks County, Pa.

Thanks in part to a \$15,000 grant received from the CGIF, 73 students took part in the Science Research Institute program during the summer of 2018. SRI provides unique opportunities and equipment for students



to further their study of cutting-edge research science. SRI focuses on improving collaborative environments between students and university and industry pioneers. Through SRI, Conrad Weiser science teachers provide students with the opportunity to explore their ideas and delve into high-level science projects.





*"THE CONTENT AND BACKGROUND GIVEN FOR EACH LAB HAS BEEN HELPFUL AND APPLIES DIRECTLY TO THE CONTENT IN MY MATERIALS SCIENCE CLASS. I WOULD RECOMMEND THE KIT TO ANY TEACHER BECAUSE IT PROVIDES THE MATERIALS NECESSARY TO COMPLETE THE LABS AND OFFERS CONTENT FOR THE STUDENTS AND TEACHER."*

MARTHA E. JAMES, SCIENCE DEPARTMENT CHAIRPERSON, ELDER HIGH SCHOOL, CINCINNATI, OHIO

The CGIF is proud to support the Science Research Institute, which is setting the standard in materials science education that benefits students, teachers, industry, and the community at large.

## STUDENT OUTREACH GRANTS

The CGIF actively seeks organizations, both domestic and abroad, who are launching a new materials science outreach program or have exciting ideas to improve an existing program or event. The Foundation offers grants for projects that engage students with learning experiences and events that inspire interest and understanding of ceramic and glass science and engineering.



*STUDENT TRAVEL GRANT RECIPIENTS IN HASSELT, BELGIUM FOR THE ECERS SUMMER SCHOOL*

**THANK YOU TO ALL THOSE WHO GAVE GIFTS TO SUPPORT THE CERAMIC AND GLASS INDUSTRY FOUNDATION AND THE AMERICAN CERAMIC SOCIETY IN 2018! WITH YOUR HELP, WE WILL CONTINUE TO ATTRACT, INSPIRE, AND TRAIN THE NEXT GENERATION OF CERAMIC AND GLASS PROFESSIONALS.**

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Dr. Shunpei Yamazaki and Semiconductor Energy Laboratory Co., Ltd.

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