

# Portland Section Newsletter

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Mid-April 2023

## The April 13th Meeting—NWSE and Scholarships

Five Portland Section scholarships were awarded Thursday night during the April 14 Portland ACS dinner Meeting. Legacy scholarships were awarded to four junior undergraduates who received cash awards of \$3500 plus a \$1000 travel grant to attend an ACS national meeting to present a paper or a poster; the fifth scholarship was awarded to a sophomore undergraduate who received a cash award of \$3500.

Recipients of the legacy scholarships include:

- Junior Owen Beale, Lewis & Clark College, the

Richard Van Santen Scholarship ;

- Junior Marni Aosved, Willamette University, the Harold Zeh Scholarship (Marni received a Dunne-Currie scholarships last year as a sophomore);
- Junior Jonathan Dutra, Portland State University, the James Anderson Scholarship;
- Junior Ellie Runkel, Portland State University, the Portland Section Scholarship.
- Sophomore Abigail Ramirez, Lewis & Clark College, the Dunne-Currie scholarship.

Each scholarship recipient spoke for a few minutes about future plans at the April 13 meeting.

## 2023 Northwest Science Expo

The Northwest Science Expo sponsored by Portland State University (PSU) was held at PSU April 3. The Portland Section sponsors two NWSE Special Awards, the Portland Section Special Award and the Portland Industrial Chemists Association (PICA) Special Award. The Portland Section Special Award recognizes the best chemistry project in the Fair and the PICA Special Award recognizes an outstanding Junior or Senior High School student project in applied chemistry. The PICA Award resulted from merger of PICA with the Portland Section in 2000.

Portland Section Judges Nick Hamel, Harry Davis and Wilbes Mbiya selected the two Portland Section Special awardees at the Fair. Each awardee received \$250 and a certificate. Awardees showed their winning projects at the April 14 dinner meeting during the social hour and were introduced and recognized by Portland Section member Nick Hamel.

Portland Section Judges selected Freshman Shreemoyee Saha from Sunset high school as the ACS Chemistry Special Award win-



Aditi Bhaskar Wilsonville High School, ACS PICA NWSE winner. (Dibblee)

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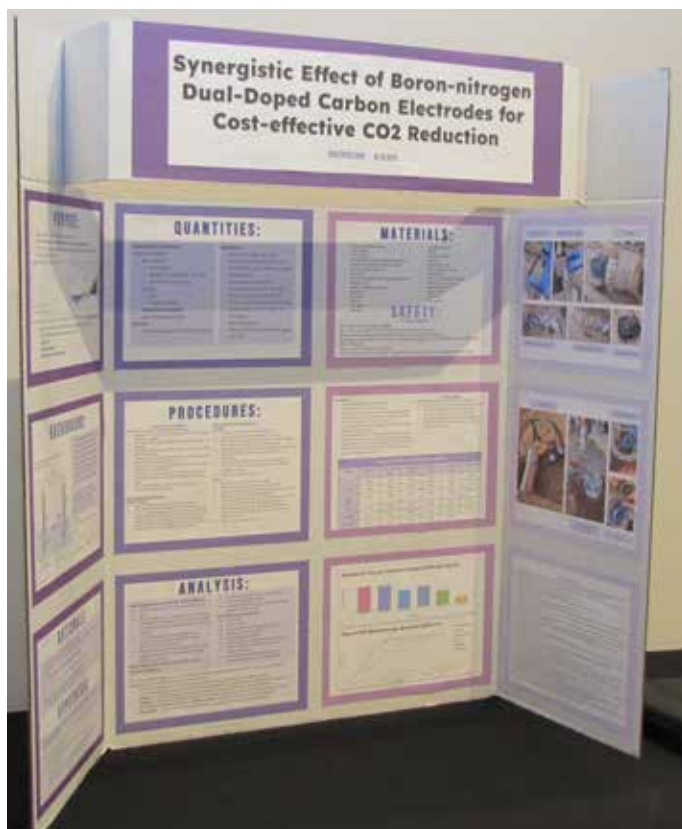
Wilbes Mbiya, Director At Large  
Hannah Boxberger, Webmaster  
Martha Dibblee, Email, Newsletter



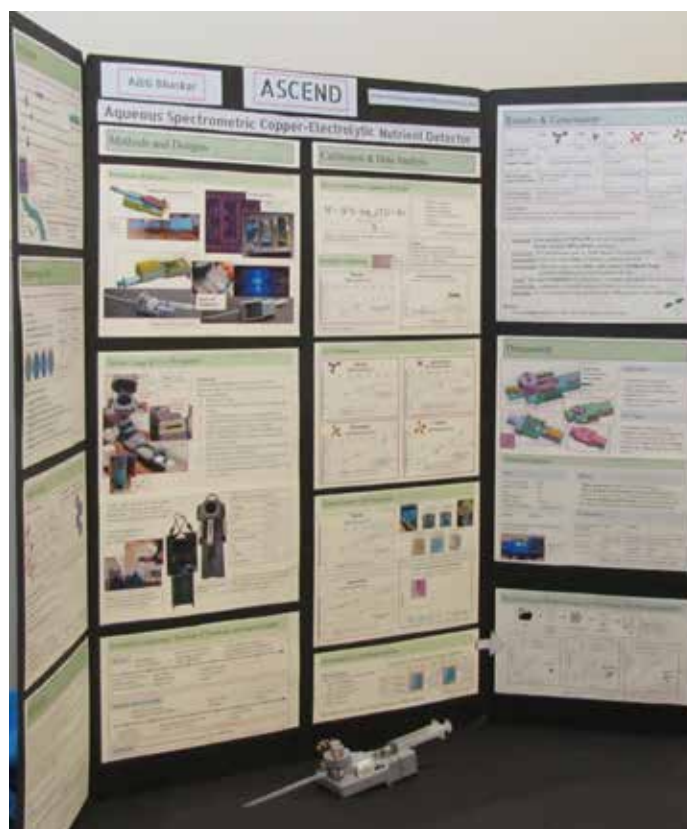
Shreemoyee Saha Sunset High School, ACS Chemistry Special Award winner. (Dibblee)

ner. Her project entitled “Synergistic Effect of Boron-nitrogen Dual-doped Carbon Electrodes for Cost-effective CO<sub>2</sub> Reduction”, is an electrolysis process for CO<sub>2</sub> reduction. She uses metal electrocatalysts and “dual doped” diamond electrodes (carbon), which reduce the cost to 0.02% of the current amount and reduce 94.33% of initial CO<sub>2</sub> in just 30 minutes! Shreemoyee Saha received Third Place overall in Chemistry at NWSE. Her teacher is Korin Riske.

The PICA award went to Senior Wilsonville High School student Aditi Bhaskar, whose project also won Best of Fair. Her project titled “ASCEND: Aqueous Spectrometric Copper-Electrolytic Nutrient Detector” describes how she invented a device (including its underlying chemical processes) that measures nitrate, ammonium, phosphate, and sulfate in samples for \$35, which is 2%-10% of the current market cost. The chemical method used for detection is single cell copper electrolysis followed by spectrometry. ASCEND’s applications are in agriculture, serving as a bottom-up method for reducing overapplied fertilizer and relieving eutrophication (nutrient pollution) in freshwater. Aditi’s project was entered in the Electrical and Mechanical Engineering category at NWSE where she received the First Place Award. Her teacher is C.J. Koll.



ACS Chemistry Special Awardee Sunset High School Freshman Shreemoyee Saha’s NWSE poster for her project “Synergistic Effect of Boron-nitrogen Dual-doped Carbon Electrodes for Cost-effective CO<sub>2</sub> Reduction” is an electrolysis process for CO<sub>2</sub> reduction. (Dibblee)



ACS PICA Special Awardee Wilsonville High School Senior Aditi Bhaskar’s NWSE poster for her project “ASCEND: Aqueous Spectrometric Copper-Electrolytic Nutrient Detector” describes a low-cost device that measures nitrate, ammonium, phosphate, and sulfate. (Dibblee)