

# *Graduate Student Oral Competition*

*1<sup>st</sup> Prize*

*\$ 500 Cash*

*Marcus A. Sharp*

Washington State University



Study of Rh Adatoms, Nanoparticles, and Mixed Oxide Systems on the Single Crystal Fe<sub>3</sub>O<sub>4</sub>(001) Surface in UHV



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# *Graduate Student Oral Competition*

*1<sup>st</sup> Prize*

**\$ 500 Cash**

***Alvin Chang***

Cornell University



Quantitative Measure of 3D Nanostructure and Size Dispersivity of Ultrasmall Fluorescent Silica Nanorings via Small-Angle X-ray Scattering



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# *Graduate Student Oral Competition*

*2<sup>nd</sup> Prize*

*\$ 300 Cash*

*Kevin D. Vallejo*

Boise State University



Tensile-strained InGaAs quantum dots on GaSb(111)A via molecular beam epitaxy



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# Graduate Student Oral Competition

*2<sup>nd</sup> Prize*

\$ 300 Cash

*Hoan Nguyen*

Oregon State University



Synergistic Study of Thermal Decomposition of Acetic Acid on Pd(111) using Ambient Pressure X-Ray Photoelectron Spectroscopy (AP-XPS) and Density Functional Theory (DFT)



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# *Graduate Student Oral Competition*

*2<sup>nd</sup> Prize*

*\$ 300 Cash*

***Nasseha Cardwell***

Washington State University



Capturing the Coverage Dependence of Aromatics via Mean-Field Models



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# *Graduate Student Oral Competition*

*3<sup>rd</sup> Prize*

\$ 150 Cash

*Carrington Moore*

Washington State University



Determining the Adsorption Mechanism of 2,3-butanediol on RuO<sub>2</sub> using First Principles



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# *Graduate Student Oral Competition*

*3<sup>rd</sup> Prize*

*\$ 150 Cash*

*Marcos Lucero*

Oregon State University



High performance iron-based phosphate anode for aqueous sodium-ion batteries



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# *Graduate Student Oral Competition*

*3<sup>rd</sup> Prize*

*\$ 150 Cash*

*Jake Soares*

Boise State University



Nucleation and growth of molybdenum disulfide grown by thermal atomic layer deposition on metal oxides



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# *Graduate Student Oral Competition*

*3<sup>rd</sup> Prize*

*\$ 150 Cash*

*Jack Grimm*

University of Washington



Characterization of the composition and mechanical properties of aprismatic crocodilian tooth enamel



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# *Graduate Student Oral Competition*

*Honorable mention*

\$ 100 Cash

***Si-Hao Chen***

Oregon State University

Cu-Ga-S/ZnS Quantum Dots with Silica Melting Gel as a Luminescent Downshifting Coating for Enhancing Solar Photovoltaic Power Generation

# *Graduate Student Oral Competition*

*Honorable mention*

\$ 100 Cash

***Widitha Samarakoon***

Oregon State University

Structure and Properties of Epitaxial LiCoO<sub>2</sub> thin films

# *Graduate Student Oral Competition*

## *Honorable mention*

\$ 100 Cash

***Anqi Yu***

Pacific Northwest National Lab

Decoupling of Strain and Temperature Effects on Microstructural Evolution during High Shear Strain Deformation

# *Graduate Student Oral Competition*

## *Honorable mention*

\$ 100 Cash

***Pritha Biswas***

Oregon State University

Oxygen Vacancy Induced Polymorphs Formation in RF Sputtered TiO<sub>2</sub> and Widening of Stability Window of Low Temperature Polymorph

# *Undergraduate Student Oral Competition*

*1<sup>st</sup> prize*

**\$ 250 Cash**

*Joel Price*

Eastern Washington University

*An optical study of LaNiFeO<sub>3</sub>*



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# *Undergraduate Student Oral Competition*

*2<sup>nd</sup> prize*

*\$ 150 Cash*

***Cole DeCesare***

Oregon State University



*Characterization and Confirmation of Products of Zeolitic Imidazolate Framework 8 (ZIF-8) Thin-Film, Room-Temperature, Microfluidic Pen Synthesis*



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# *Undergraduate Student Oral Competition*

*2<sup>nd</sup> prize*

\$ 150 Cash

***Beckett Lewis***

Oregon State University



*Controlling the Morphology of Vapor Phase Deposition of Tungsten by Different Heating Techniques*



**SECOND**

**PLACE**





*High School Student*  
*Outstanding Performance Award*

**\$ 100 Cash**

***William Guo***  
Lincoln High School



Techno-economic Comparison of Catalysts for Proton-Exchange Membrane Electrolysis

# Awards Winners

Please send your postal address to following people.....

Please contact **Doug Jones** for your **Award Check**: [DLJ9@comcast.net](mailto:DLJ9@comcast.net)  
And copy your email to Theva Thevuthasan at [theva@pnnl.gov](mailto:theva@pnnl.gov)

Please contact **Shuttha Shutthanandan** for your **Award Certificate**: [Shuttha@pnnl.gov](mailto:Shuttha@pnnl.gov)