



Davidson Institute
Fellows Scholarship

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**FALLS CHURCH TEEN AWARDED \$25,000 SCHOLARSHIP FOR
DEVELOPING NANOPARTICLE COATING TECHNIQUE WITH
CANCER TREATMENT AND BATTERY PERFORMANCE APPLICATIONS**
Oliver Wang Named A 2024 Davidson Fellows Scholarship Winner

Washington – The Davidson Fellows Scholarship Program has announced the 2024 scholarship winners. Among the honorees is 16-year-old Oliver Wang of Falls Church. Wang won a \$25,000 scholarship for his project, *NanoDiffusion: An Ultra-Precision, Compact Powder Optimization System for Advancing Nanoparticle Cancer Treatment and Battery Applications*. He is one of only 20 scholarship winners in the 2024 Fellows class.

“Being a Davidson Fellow is more than an honor to me; it provides me with the confirmation that my research has an impact,” said Oliver Wang. “I am more confident in my ideas and feel more encouraged to continue pursuing my research passions. I am also grateful for the Davidson Fellows resources and community of other talented students to connect with.”

For his project, Wang developed an ultra-precise, compact powder optimization technique to enhance the electrode coating manufacturing process in lithium-ion batteries, thereby improving their performance and longevity. His innovation demonstrated the potential to boost charge flow in electric vehicle batteries, making them a more viable and efficient transportation method. Additionally, Wang's device has potential applications in nanoparticle development, particularly in filtering cancer nanoparticles to improve their targeting ability and increase the success rate of nanoparticle-based cancer treatments. By increasing the delivery rate to tumor sites, fewer nanoparticles are needed, which reduces costs, improves accessibility, and enhances treatment success rates.

Wang is a rising high school junior in Alexandria with a passion for engineering practical applications to solve real-life problems, drawing theoretical inspiration from computer science and mathematics. Outside of his research, Wang enjoys playing the drums in a youth symphonic orchestra, saltwater fishing, and swimming.

"This year's class of Davidson Fellows Scholarship recipients exemplifies the power of innovation and perseverance," said Bob Davidson, founder of the Davidson Institute. "Our Fellows continue to push the boundaries of their educational and research pursuits, striving to

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solve some of the world's most challenging problems by leveraging creative, outside-the-box thinking and cutting-edge technology to expand their networks, access new sources of information, and deliver an impressive array of diverse projects."

The 2024 Davidson Fellows will be honored during a reception at the Smithsonian National Museum of the American Indian in Washington, D.C. and with a virtual project presentation ceremony in September 2024.

The Davidson Fellows Scholarship program offers \$50,000, \$25,000 and \$10,000 college scholarships to students 18 or younger, who have completed significant projects that have the potential to benefit society in the fields of science, technology, engineering, mathematics, literature and music. The Davidson Fellows Scholarship has provided more than \$9.9 million in scholarship funds to 448 students since its inception in 2001, and has been named one of the most prestigious undergraduate scholarships by [U.S. News & World Report](#). It is a program of the Davidson Institute, a national nonprofit organization headquartered in Reno, Nev. that supports profoundly gifted youth.

About the Davidson Institute

Founded by Bob Davidson in 1999, the Davidson Institute recognizes, nurtures and supports profoundly intelligent young people, and provides opportunities for them to develop their talents to make a positive difference. The Institute offers support through a number of programs and services, including the Davidson Fellows Scholarship and the [Davidson Academy of Nevada](#). For more information about the 2024 Davidson Fellows, please visit: [DavidsonFellows.org](#).

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