Grace Velarde

Scholars Week Submission Abstract

I created a 3D animation that visualizes the article called *Elastic Electron Scattering from Methane Molecule in the Energy Range from 50–300 eV* from the International Journal of Molecular Sciences published by MDPI in 2021 whose research was conducted by Jelena Vukalovi´c, Jelena B. Maljkovi´c, Karoly Tökési, Branko Predojevi´c, and Bratislav P. Marinkovi´c. This is the link to my 2 minute animation: https://vimeo.com/515953853

This realistic research visualization of a recent particle collision experiment based on the crossed-beam technique that takes place in a vacuum chamber conducted this year showcases my unique process as an artist studying animation, film, and computer science with an interest in physics to study, dissect, and analyze and depict this original research article. It demonstrates my ability to synthesize and digitally illustrate what is unseen to the naked eye. With 2D edits made in the post-production phase including text and voice overs, the video simplifies an elaborately descriptive new experiment. Everything from the camera navigation to the use of colors and materials was meticulously chosen to make the final product easy to follow to those who have not read the research article. I used my artistic license of creative thinking and use of imagination in making this scientific experiment come to life and present this material to the audience in a short time frame.