

# Azbuka pupils visit Imperial College London

On 10 January 2023, Years 4, 5 and 6 had a chance to visit the Department of Chemical Engineering of one of the leading UK and world universities. We were taken to several laboratories where scientists and their students told us about their cutting edge research projects and their practical applications in the areas of alternative energy sources, CO<sub>2</sub> sequestration, pharmaceuticals and even forensic science!



Dr Anna Hankin, our host, gave us a presentation on how to obtain **fuel - hydrogen - from sunlight**. We saw a small car running on hydrogen, which was produced, before our eyes, by photocatalytic water splitting using just light. She also showed us the impressively equipped Electrochemical Systems Laboratory where students were busy perfecting the technology.

Prof. Sergei Kazarian, an expert in **advanced spectroscopy**, showed us electromagnetic spectrums of his silk tie and polyester tie (so that we know the difference :). He also told us about their investigation of the paintings from the Houses of Parliament in order to detect any paint deterioration. His childhood interest in Sherlock Holmes has led

him to develop high resolution chemical imaging for analysing fingerprints.



Dr Andrius Patapas is developing a new method for large-scale graphene manufacturing. Graphene is a recently **engineered material with miracle properties**. In 2010, Russian-born A. Geim and K. Novoselov were awarded the Nobel Prize in Physics for their groundbreaking experiments regarding graphene. Also, Alexey and Konstantin, reserchers from Novosibirsk, told us about their promising investigations in **gas hydrates** and **fluorescence**.

**We had a really educating visit which has expanded our horizons and, hopefully, laid the foundation for further cooperation!**