

Falling Walls Lab Vietnam 2019
Mr Nguyen Ngoc Khang
Breaking the Wall of Nitrogen Oxides



**FALLING
WALLS
LAB**



You delivered the winning performance at the Falling Walls Lab Vietnam? What is your innovative idea?

My idea is to introduce a novel catalyst in vehicles and industrial factories for the treatment of nitrogen oxides (NO_x), which are toxic air pollutants and cause serious adverse effects all over the world. The unique structure of this catalyst provides outstanding stability and activity for the reduction of nitrogen oxides in exhaust gas thus “Breaking the Wall of Nitrogen Oxides”.

Why should people pay attention to your research project?

The total amount of nitrogen oxides (NO_x) released worldwide is about 115 million tons per year and is expected to increase rapidly due to the industrialization and growing populations in many countries. These pollutants have detrimental effects on both human health and the environment. In humans these pollutants affect respiratory and lung function. NO_x also plays a role in the formation of fine particles (PM), leading to several negative health effects. NO_x pollutants also make vegetation more susceptible to disease and affect plant growth. In addition, and also react with other pollutants to cause environmental damage.

You will be representing Vietnam in the global Falling Walls Lab Finale in Berlin this November? How are you preparing for the event?

Falling Walls Lab Finale in Berlin is a precious opportunity for me to introduce my research project of material for abatement of NO_x to other researchers, environmental activists, and policymakers from all over the world. I am working hard to achieve better materials and experimental results as well as refurbishing my presentations to make it perfect for the Finale.

You are also the winner of the EURAXESS Prize 2019 to visit a research lab anywhere in the EU. What are your plans?

I intend to visit two academic institutions in Europe with the generous support of the EURAXESS Prize: The University of Grenoble Alpes in France and the University of Rostock in Germany. These universities not only offer courses in material and catalyst technology, which suit my future academic plan, but also have large Vietnamese communities who can help me settle in Europe.

Where do you see yourself in 10 years in terms of your research idea and your career?

After completing my Ph.D. degree majoring in Chemistry, I will continue working as a researcher with a focus on solving environmental problems. I would like to develop products that are able to impact the environment positively.

Thanks so much and good luck in Berlin!