

SDG Graduate School Vietnam: Four partners for more sustainability



Signing of the double degree contract (from left: Prof Wolfgang Schareck, Rector of the University of Rostock, and Prof Hoang Minh Son, President of the Hanoi University of Science and Technology HUST)

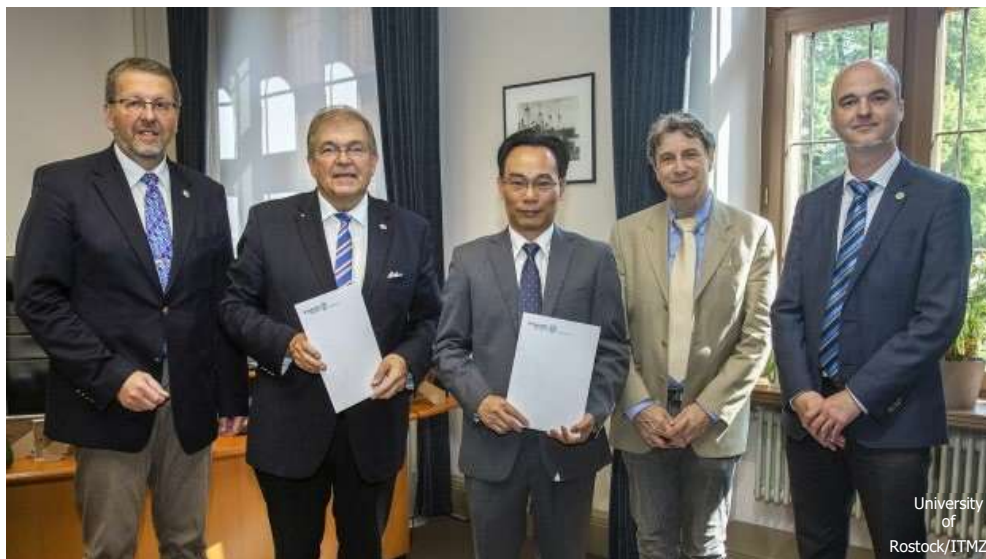
The University of Rostock and the Leibniz Institute for Catalysis, together with Hanoi University of Science and Technology and Hanoi University of Science, have joined forces in an SDG Graduate School that focuses on the key technology of catalysis. The result is a collaborative venture that benefits both sides.

'Normally,' says Dirk Hollmann, 'international science partnerships only take place on a small scale between individuals, and mostly between industrialised countries.' A chemist with a doctorate from the University of Rostock, Hollmann explains what makes the German-Vietnamese Graduate School he runs rather special: it is an institutional, strategically oriented four-way partnership between the University of Rostock, the Leibniz Institute for Catalysis with which it is associated, Hanoi University of Science and Technology (HUST) and the latter's cooperation partner, Hanoi University of Science (VNU-HUS). 'This allows us to combine the strengths of all four partners,' says Hollmann.

Broad impact through long-term and short-term scholarships

The collaborative nature of the programme is reflected in its title – RoHan SDG Graduate School 'Catalysis as Key Towards Sustainable Resource Management': 'RoHan' stands for the connection between Rostock and Hanoi in the field of chemistry and catalysis. The cooperation aims to have as broad an impact as possible through long-term and short-term scholarships. 'This means the influence is longer-lasting – in both research and business,' says Hollmann.

The programme is one of seven bilateral SDG Graduate Schools funded by the DAAD that aim to help implement the 17 Sustainable Development Goals (SDGs) adopted by the United Nations in 2015. The financial resources for the funding are provided by the Federal Ministry for Economic Cooperation and Development (BMZ).



Ceremonial signing of the double-degree contract (from left: Prof Udo Kragl, Prorector for Research and Knowledge Transfer, Prof Wolfgang Schareck, Rector of the University of Rostock, Prof Hoang Minh Son, President of Hanoi University of Science and Technology- HUST, Michael Paulus, Head of Rostock International House, Dr Dirk Hollmann, Head of the RoHan Project)

Building on international research

'The cooperation with Rostock is of fundamental importance to us in Vietnam,' says Assistant Professor Le Minh Thang of HUST. She is in charge of the Vietnamese side of the cooperation: 'The exchange keeps us more in touch with the international state of research.' Among other things, Le Minh Thang welcomes the fact that laboratories with cutting-edge equipment have been set up for the Vietnamese partners. 'Now we can do research at the same level,' she says, 'and students who were in Rostock for the exchange can enjoy a smooth transition when they come back to continue their studies here in Hanoi.' Given the level of knowledge and exchange that is now possible among professors and students, 'the issue of sustainability is now gaining fresh momentum in Vietnam.' As she sees it, the university cooperation also contributes to the advancement of women. 'There are more opportunities now and this is encouraging women to study chemistry. It makes the subject more accessible for them. Access via employment as a chemist working for a company is more difficult in Vietnam since working conditions are often not easy for women.'

Lecture in Vietnam

Double degree programme in planning

Currently, 50 students, doctoral candidates, postdocs and professors are involved in the collaboration: the ultimate aim is to increase this to 65. In addition, the partners involved signed a cooperation agreement to develop a double degree that is recognised in both countries. Participants are to spend one academic year each in the host country from September 2019 onwards. The master's degree is awarded and recognised by both universities.

Following the signing of the double degree contract in June 2019, the Rector of the University of Rostock, Prof Wolfgang Schareck, and the Director of Hanoi University of Science and Technology, Prof Hoang Minh Son, underscored the long-term impact this would have on the universities' internationalisation strategies and cooperation.



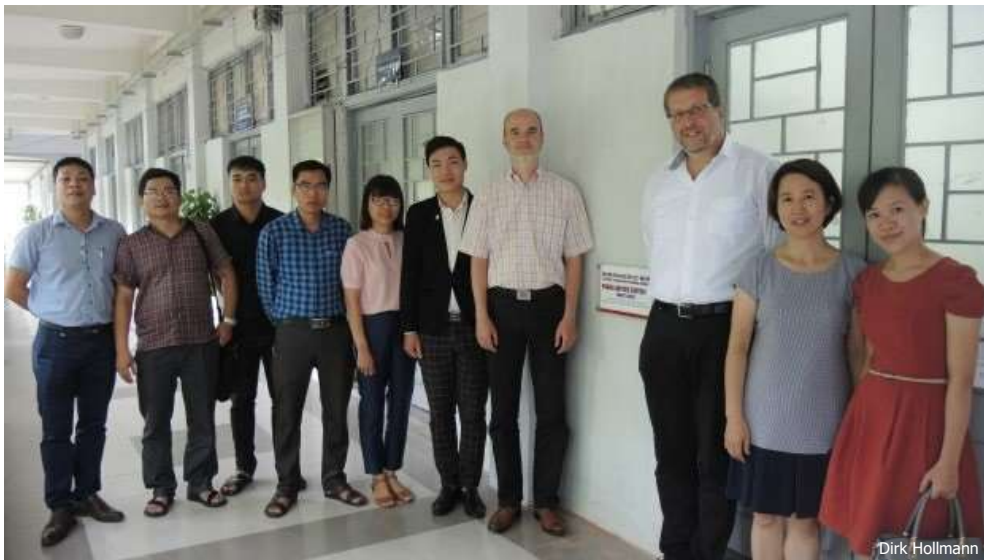
The Prorector for Research and Knowledge Transfer and head of the double degree programme at the Institute of Chemistry, Prof Udo Kragl, called the agreement 'a prime example of how international cooperation can be taken to a new level'.



Research on catalysts for wastewater treatment (from left: Dr Dirk Hollmann, Ngo Anh Binh, Julia Haak)

Catalysis as a key technology

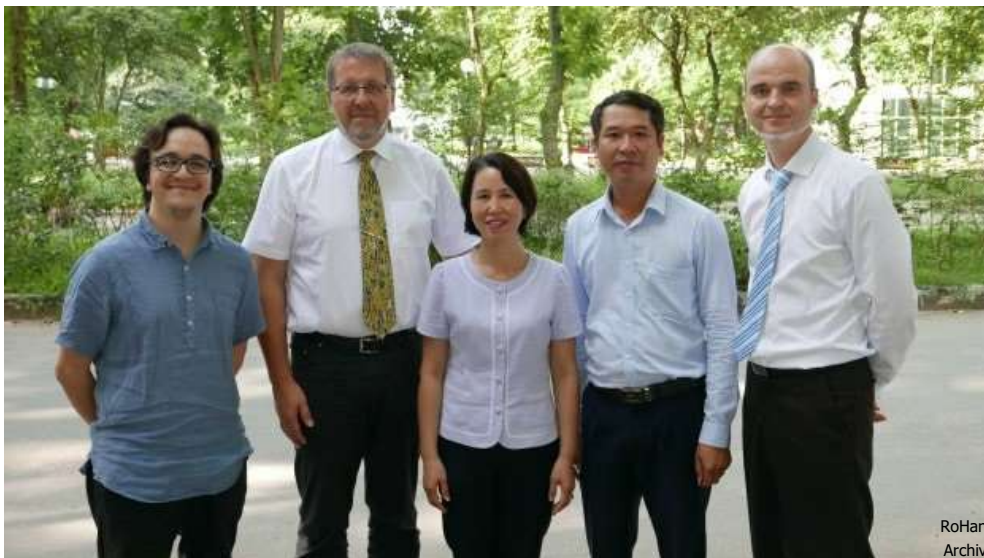
The projects focus on catalysis – a technology that is key in shaping day-to-day life in developed societies. Joint research is conducted that applies to global problems such as water and exhaust gas purification. Vietnamese researchers regard Germany as a pioneer when it comes to new technologies. 'Groundwater and rivers in Vietnam are poisoned by wastewater from the textile and large-scale industries, so only bottled water is drinkable,' says Hollmann. 'In addition, there's smog in the cities due to traffic and industry.' Catalysis helps finding a solution here, just as it enables the storage of electric power and the production of many substances required on a daily basis. It is a key technology for production and utilisation, so it supports sustainability, to which the seven DAAD-funded Graduate Schools are committed. 'We need catalysis research to curb global warming, achieve a better energy balance and tap into renewable sources,' says Prof Matthias Beller, the director of the Leibniz Institute for Catalysis. It is the largest institute of its kind in Europe.



Inauguration of the RoHan Catalysis Lab at Hanoi University of Science and Technology (HUST) with Dr Dirk Hollmann (4th from right), Prof Udo Kragl (3rd from right) and Prof Le Minh Thang (2nd from right)

Rapid development in Vietnam

Germany is a leader in catalysis research – and its advancement is indispensable for an emerging country like Vietnam, one of the fastest developing countries in the world. Student numbers have been growing rapidly for several years now. In the PISA ranking, Vietnam achieved exceptional results for a developing country, including 8th place worldwide in the natural sciences. The sustainable development sector is growing by between 16 and 17% per year according to domestic sources. Meanwhile, research is struggling to keep up. There is no compulsory schooling, and parents have to pay for their children’s education themselves. Hollmann has noted that other forms of academic study are more differentiated in Vietnam than in many industrialised countries: there are online courses that allow people to study from anywhere, for example.



Coordinators of the RoHan project (from left: Dr Esteban Mejia, Prof Udo Kragl, Prof Le Minh Thang, Prof Le Thanh Son, Dr Dirk Hollmann)

Long tradition between the two countries

Relations between the universities go back more than a generation. The number of Vietnamese who studied, worked or trained in East Germany is estimated at 100,000. Rostock maintained contact through the fall of communism in 1989 and built on this to develop the broad-based university cooperation that is now beginning to bear entirely new fruit in terms of sustainability.

Wolfgang Thielmann (27 August 2019)