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# Rainer Blatt elected to the National Academy of Sciences

**Quantum physicist Rainer Blatt from Innsbruck, Austria, has been elected associate member of the American National Academy of Sciences. This honour has so far only been conferred on very few Austrian scientists. With Rainer Blatt and Peter Zoller, two physicists from Innsbruck are now represented in this renowned institution.**

Rainer Blatt, scientific director at the Institute of Quantum Optics and Quantum Information (IQOQI) of the Austrian Academy of Sciences (ÖAW) and Professor of Experimental Physics at the University of Innsbruck, was elected foreign associate of the US National Academy of Sciences (NAS) on April 30, 2019, as announced by the Washington D.C. facility. The Graz molecular biologist Rudolf Zechner was also elected. In addition to Blatt and Zechner, a total of six Austrians - Wolfgang Lutz, Peter Schuster, Anton Zeilinger and Peter Zoller - are now represented in the NAS.

Since the mid-1990s, the Innsbruck experimental physicist Rainer Blatt and his team have been working on the realization of quantum computers. Ions trapped electromagnetically in a vacuum chamber and cooled to temperatures close to absolute zero serve as quantum bits. Captured ions are the most advanced quantum information processing technology to date. Today, the physicists led by Rainer Blatt control up to 20 ions and are able to perform computing operations on them. Soon, they plan to use up to 50 fully controlled ions to advance into computing domains that cannot be reached with conventional computers. In addition to the vision of a universally programmable quantum computer, Blatt's work is also laying the groundwork for new quantum technologies that will be introduced in many areas of life in the coming years and decades. He has already received numerous international awards for his pioneering achievements, including the John Stewart Bell Prize, the Stern Gerlach Medal, a Humboldt Research Prize and the Carl Zeiss Research Prize. Only last week, Rainer Blatt and eleven other physicists were awarded the Micius Quantum Prize.

The National Academy of Sciences (NAS) is one of the oldest and most respected scientific institutions in the USA. It was founded by Abraham Lincoln in 1863 with the mission of advising the government and the public on scientific matters. The NAS currently has 2,347 U.S. members from various disciplines and 487 associate members from abroad.

**Links:**

- Quantum Optics and Spectroscopy (Rainer Blatt)  
<https://quantumoptics.at/>
- National Academy of Sciences  
<http://www.nasonline.org/>

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