

## CONTACT INFORMATION

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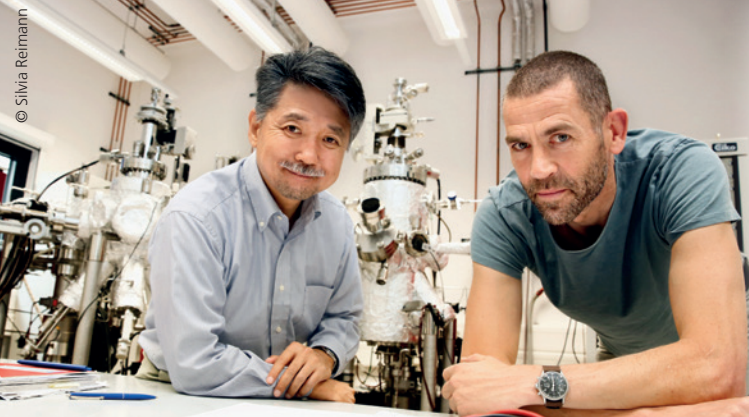
For open positions within ML4Q, please check  
[ml4q.de/career/](http://ml4q.de/career/)

CLUSTER OF EXCELLENCE

# ML4Q

## Matter and Light for Quantum Computing

[www.ml4q.de](http://www.ml4q.de)



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## ABOUT ML4Q

"Matter and Light for Quantum Computing" (ML4Q) is a new Cluster of Excellence funded within the Excellence Strategy by the German Research Foundation (DFG) since January 2019. It is a cooperation by the universities of Cologne, Aachen, and Bonn, as well as the Research Center Jülich.

## SCIENCE

The aim of ML4Q is to develop new computing and networking architectures using the principles of quantum mechanics. Computing and networking power beyond anything classically imaginable would make quantum computers powerful tools in key areas such as materials design, pharmaceuticals, or artificial intelligence. Quantum communication could be made effectively secure. ML4Q builds on the complementary expertise in the three key research fields of solid-state physics, quantum optics, and quantum information science to develop the best hardware platform for quantum information technology, and provide comprehensive blueprints for a functional quantum information network.



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## RESEARCH SCHOOL

ML4Q will help train the next generation of scientists and engineers in quantum technology. The cluster-wide ML4Q Research School will build on the successful existing inter-site structure, the Bonn-Cologne Graduate School of Physics and Astronomy (BCGS), and connect closely to the Research Training Group on "Quantum many-body methods in condensed matter systems" (RTG 1995) in Aachen.



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