

4th (final) Call 2025

CZS Center QPhoton

- Innovation Projects -

This call is part of the Carl-Zeiss-Stiftung Center for Quantum Photonics Jena – Stuttgart – Ulm (CZS Center QPhoton), funded by the Carl-Zeiss-Stiftung from 07/2022 until 12/2027 under the project ID P2021-00-019.

CZS Center QPhoton **Innovation Projects** – in a nutshell

Eligibility	All IQST fellows (www.iqst.org/iqst-fellows) in Stuttgart/Ulm and all ACP principal scientists (www.acp.uni-jena.de/principal-scientists) in Jena.
Goal	Dedicated support for cross-location, high-risk and/or high-innovation projects in quantum photonics within IQST and ACP
Project size	3 partners per project with 180,000 EUR max. per partner location (more if well justified)
Project start	Still in late 2025 or start of 2026, as quick as possible after the selection.
Project duration	24 months maximum
Project proposal	6 pages max. to be sent to office@qphoton.de
Deadline (4th call)	15.10.2025
Selection process	The CZS Center Photon Advisory Board will report to the Executive Board .
Contact persons	Andreas Tünnermann (ACP Jena), Tilman Pfau (Uni Stuttgart), Joachim Ankerhold (Uni Ulm)

Vision

The vision of the CZS Center QPhoton is to establish a comprehensive and sustainable scientific, intellectual and infrastructural foundation for advanced quantum imaging and information processing, including optimized imaging and sensing techniques to monitor and control quantum systems, the application of quantum technologies to develop quantum-enhanced imaging methods, and the development and deployment of sophisticated methods to control and distribute quantum information.

Goal of the Innovation Projects

QPhoton Innovation Projects are designed as "seed projects" that work to strengthen the cross-location relationship between IQST and ACP, address the development of novel, location-independent competencies and, among other goals, create a foundation for further competitiveness in national and international funding schemes. Each QPhoton Innovation Project should lead ideally to joint publications such that a collaborating record for future joint applications can be shown to exist.

Innovation Areas and goals of the Innovation Projects

Within the framework of the Carl-Zeiss-Stiftung Center for Quantum Photonics (QPhoton), four cross-location **Innovation Areas** were established to connect the Jena, Stuttgart and Ulm research directions. In short, QPhoton will focus on fundamental research in quantum photonics, having a perspective in applications of quantum technology. The following Innovation Areas represent exemplary fields, whilst the research addressed in the projects is not meant to be exclusive to them:

- **Innovation Area 1: Sensing technology to control quantum systems**
...including application-oriented (nonlinear) imaging techniques for quantum sensing, quantum simulators and quantum computers.
- **Innovation Area 2: Quantum technology for advanced quantum imaging methods** ...
including imaging methods with quantum light.
- **Innovation Area 3: Information processing for quantum technology**
...including quantum information and advanced information processing methods for data analysis and quantum-based network architectures.
- **Innovation Area 4: Photonic systems for quantum control and information processing**
...including basic research on integrated quantum photonics.

Note that proposals in Areas 3 and 4 are preferred, since we intend to put an even stronger focus on quantum information processing in a prospective 2nd funding period of QPhoton.

Type of support

The funds requested for each project should be specified in the project proposal. Each QPhoton Innovation project can have a funding size of up to 180,000 EUR at any of the three involved institutions (in sum 540,000 EUR or more if well justified). For each Innovation project, the major amount of funds should be used to cover staff salaries. Yet, investments into research infrastructure are also possible if useful for the project goals. The selection board reserves the option to cut budgets, if necessary.

Selection criteria

QPhoton Innovation Projects are concerned with groundbreaking and high-risk research undertakings that address one or more of the Joint Innovation Areas. The selection criteria are:

- Scientific excellence and significance with regard to at least one Innovation Area
- Collaboration of all three locations (Jena, Stuttgart, Ulm) in one project
- Direct and short-term enhancement of the involved scientists' competitiveness with regard to large national and international funding schemes in quantum technologies
- Efficiency of the use of the funding
- Feasibility of the project goals (e.g. joint publication perspective)
- A high level of innovation and/or risk of the proposal including a statement on the advantage of being funded by QPhoton rather than another extramural funding scheme

Application, review and selection process

To guarantee for a high scientific level, a jury composed of the Advisory Board members of CZS Center QPhoton will perform a peer-review of all submitted project proposals. The QPhoton Advisory Board will report to the QPhoton Executive Board and formulate a funding suggestion. The QPhoton Executive Board will take the final decision on the grants.

The following procedure is envisioned:

- All eligible scientists from ACP and IQST are invited to build application teams in order to fulfill the specified selection criteria.
- **Since 2023, altogether six QPhoton Innovation projects have been granted and are currently running. The project leaders of these projects are explicitly invited to submit "follow-up" innovation projects, either with the current or a different PI combination. These follow-up projects can refer to previous achievements (papers, grants). They may build on previous research lines or, alternatively, propose new themes that have developed.**
- In this 4th call, the application deadline is October 15, 2025.
- Please use the template from the website and submit it together with your 6-page research proposal to office@photon.de. The proposal should include the names of the responsible scientists, the targeted scientific challenge (short state of the art and prospective research goals), and a statement to each point of the selection criteria.)
- The QPhoton office will check each application for eligibility and completeness and, if necessary, ask for completing information within a few days.
- With the submission, the applicants agree that their proposal is submitted to the jury for peer-review.
- After a positive funding decision from the QPhoton Executive Board, the applicants take on the responsibility of reporting to the board and to the QPhoton general assembly during and at the end of the project (on-demand, either with a presentation or written report) and of contributing to the fulfillment of regular reporting obligations to the Carl-Zeiss-Stiftung.
- After a positive decision, the project should be started very quickly as the funding from the Carl-Zeiss-Stiftung is limited in time. After a recent prolongation of the project, the final date is now December 31, 2027.

Jena/Stuttgart/Ulm, in June 2025

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