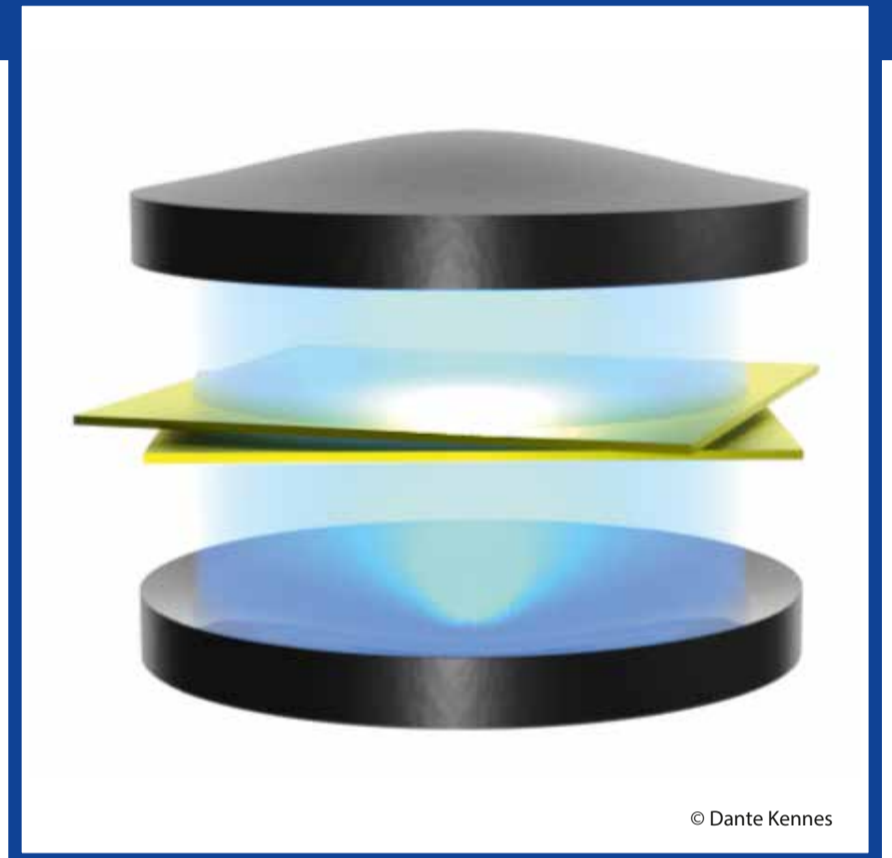


Shedding Quantum Light on Strongly Correlated Materials

International Workshop 22 - 26 August 2022

This workshop aims at identifying new research directions, as well as developing a comprehensive framework for constructing, probing, and modelling strong-coupling QED in correlated quantum materials, thereby establishing a common ground for physicists working in the fields of quantum optics and condensed matter.



Key questions:

- Which degrees of freedom of the correlated material can be efficiently coupled to quantum fluctuations in cavities?
- How should QED be formulated within a strongly correlated material and in the absence of a clear perturbative parameter?
- What is the role of the driven/dissipative nature of the light confined within materials?
- Which novel phases of matter can be induced or stabilized using cavity-QED?
- Are there possibilities for observing novel quantum nonlinear optical phenomena?

Invited speakers: (* to be confirmed)

S. Diehl (DE)
E. Demler* (US)
T. Donner (CH)
M. Eckstein (DE)
J. Faist (CH)
M. Hafezi (US)
A. Hemmerich (DE)
J. Keeling (UK)
G. Morigi (DE)
G. Pupillo (FR)
P. Rabl (AT)
S. Ravets (FR)
H. Ritsch (AT)
D. Sanvitto (IT)
F. Schlawin* (DE)
M. Sentef (DE)
M. Szymanska (UK)
O. Zilberberg (CH)

Scientific coordinators:

Ataç İmamoğlu
(Zürich, Switzerland)

Dieter Jaksch
(Hamburg, Germany)

Francesco Piazza
(Dresden, Germany)

Organisation:

Claudia Domaschke
(MPIPKS Dresden)

Applications received before 15th July 2022 are considered preferentially.

We aim for an in person workshop with all participants on-site.

Applications are welcome and should be made by using the application form on the workshop web page (see contact details on the right). The number of attendees is limited. The **registration fee** for the international workshop is 140 Euro and should be paid by all participants. Costs for **accommodation and meals** will be covered by the Max Planck Institute. Limited funding is available to partially cover **travel expenses**.

For further information please contact:

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