



Contribution ID : 34

Type : **Oral**

Dressed emitters as impurities

mercoledì 13 ottobre 2021 15:20 (25)

Here, we present a compact formulation of the resolvent-based theory for calculating atom-photon dressed states built on the idea that the atom behaves as an effective impurity *(i)*. This establishes an explicit connection with the standard impurity problem in condensed matter. When the impurity reduces to a vacancy, the resulting class of dressed states play a central role in the emerging area of topological quantum optics *(ii)* in that any topologically-robust dressed state is a VDS *(iii)*.

(i) L. Leonforte, D. Valenti, B. Spagnolo, A. Carollo, F. Ciccarello, arXiv:2108.11963

(ii) M. Bello, G. Platero, J. I. Cirac, and A. González-Tudela, Sci. Adv. 5, eaaw0297 (2019)

(iii) L. Leonforte, A. Carollo, F. Ciccarello, PRL 126, 063601 (2021)

Primary author(s) : LEONFORTE, Luca (Università degli studi di Palermo); Prof. VALENTI, Davide (Università degli studi di Palermo); Prof. SPAGNOLO, Bernardo (Università degli studi di Palermo); CAROLLO, Angelo (Università degli Studi di Palermo); CICCARELLO, Francesco (Università degli Studi di Palermo)

Presenter(s) : LEONFORTE, Luca (Università degli studi di Palermo)

Session Classification : Session 6