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Condensation of microcavity polaritons with a disorder induced distribution of oscillator strengths FRANCESCA MARIA MARCHETTI, JONATHAN KEELING, MARZENA H. SZYMANSKA, PETER B. LITTLEWOOD, Cavendish Laboratory, TCM, University of Cambridge — Partly motivated by recent experiments [1, 2], a model for condensation of disordered excitons coupled to cavity photons is investigated. The inhomogeneous broadening of the excitonic energies is combined with a distribution of oscillator strengths, allowing for correlations between the exciton energies and their coupling to light. Results are discussed in terms of the mean-field phase diagram, the spectrum of excitations and the polariton photoluminescence.

[1] P. G. Lagoudakis *et al.*, J.Appl.Phys. **95**, 2487 (2004)

[2] M. Richard *et al.*, J. Phys. C **16**, S3683 (2004)

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