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Title: **Progress with correlated wave functions: The role of backflow, long-range Jastrow correlators and of the renormalized bandstructure**

Our level of understanding correlated electron systems has seen substantial advancements in the last year due to improved variational wavefunctions of generalized Gutzwiller-RVB type. Long-range Jastrow correlators allow to describe Luttinger-liquid properties accurately in one dimension and a correct description of insulating states, which had not been possible when using classical Gutzwiller states. Backflow correlations introduce a new type of doublon-holon correlations allowing to treat the doublon-holon excitons correctly in the large-U limit and for an improved understanding of the Fermi-surface renormalization close to the Mott-Hubbard transition.