Documentation and definition of the model

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(Dated: July 19, 2016)

The Hamiltonian is defined as:

$$-t \sum_{\langle \boldsymbol{i},\boldsymbol{j} \rangle \sigma} \left(\hat{c}^{\dagger}_{\boldsymbol{i},\sigma} \hat{c}_{\boldsymbol{j},\sigma} + H.c. \right) + J \sum_{\boldsymbol{i}} \hat{\boldsymbol{S}}^{c}_{\boldsymbol{i}} \cdot \hat{\boldsymbol{S}}^{f}_{\boldsymbol{i}} + 4 I_z \sum_{\langle\langle \boldsymbol{i},\boldsymbol{j} \rangle\rangle} \hat{S}^{f,z}_{\boldsymbol{i}} \hat{S}^{f,z}_{\boldsymbol{j}} \tag{1}$$