

Hamiltonianos do Sistema Sierpinski

Hamiltoniano do Sistema Sierpinski com Desordem Anderson - $\beta = 1$

$$H = \sum_{i \in \text{Sierpinski}} \epsilon_i c_i^\dagger c_i - \sum_{\langle i,j \rangle \in \text{Sierpinski}} t c_i^\dagger c_j \quad (1)$$

Hamiltoniano do Sistema Sierpinski com Desordem Anderson - $\beta = 2$

$$H = \sum_{i \in \text{Sierpinski}} \epsilon_i c_i^\dagger c_i - \sum_{\langle i,j \rangle \in \text{Sierpinski}} t_{ij} c_i^\dagger c_j \quad (2)$$

$$t_{ij} = \sigma_0 e^{i\frac{\phi}{2}(x_i - x_j)(y_i + y_j)}$$

Hamiltoniano do Sistema Sierpinski com Desordem, Spin-Orbit e Campo Zeeman

$$H = \sum_{i \in \text{Sierpinski}} (\epsilon_i + e_z \sigma_z) c_i^\dagger c_i - \sum_{\langle i,j \rangle_x} (t\sigma_0 - \frac{i\alpha}{2} \sigma_y) c_i^\dagger c_j - \sum_{\langle i,j \rangle_y} (t\sigma_0 + \frac{i\alpha}{2} \sigma_x) c_i^\dagger c_j \quad (3)$$