

$$\mathcal{U}_{I+MI}(t, t') = \mathbb{T} \exp \left\{ \int_t^{t'} d\tau \left[ \overbrace{\mathcal{H}_I(\tau) - \mathcal{V}_I(\tau)}^{\text{green}} + \underbrace{\mathcal{H}_{MI}(\tau) - \mathcal{V}_{MI}(\tau)}_{\text{red}} \right] \right\}$$