

$$\mathcal{K}_{\text{ph};1234;\sigma\sigma'}^{(1);q} =$$

The diagram illustrates the one-loop process  $\mathcal{K}_{\text{ph};1234;\sigma\sigma'}^{(1);q}$ . It features an incoming electron-positron pair with momenta  $q$  and spins  $\sigma, 1$  and  $\sigma, 2$ . These particles annihilate into a photon with momentum  $q$  and spin  $\sigma\sigma_1$ , represented by a wavy line. This photon then interacts with a fermion loop (labeled  $\chi_{\text{ph};ba d c}$  with spins  $\sigma_1\sigma_2$ ) via a vertex labeled  $\mathcal{U}_{\text{ph};12ab}$  with spins  $\sigma\sigma_1$ . The loop then emits another photon with momentum  $q$  and spin  $\sigma_1\sigma'$  via a vertex labeled  $\mathcal{U}_{\text{ph};c d 3 4}$  with spins  $\sigma_1\sigma'$ . Finally, this photon decays into an outgoing electron-positron pair with momenta  $q$  and spins  $\sigma', 3$  and  $\sigma', 4$ .