

**Fig.1** Real (dotted) and imaginary (solid) parts of the dielectric function of Ni at 300 K calculated from the sum model but showing the total contribution (black) as well as the Drude (green, blue) and Lorentz (red) contributions separately.



Fig. 2 Frequency-dependent scattering rate as a function of photon energy. The dotted line shows results calculated from a Drude model with two carrier species as shown in Fig. 1. The symbols and solid lines show results calculated from our experimental data and our product model, respectively.