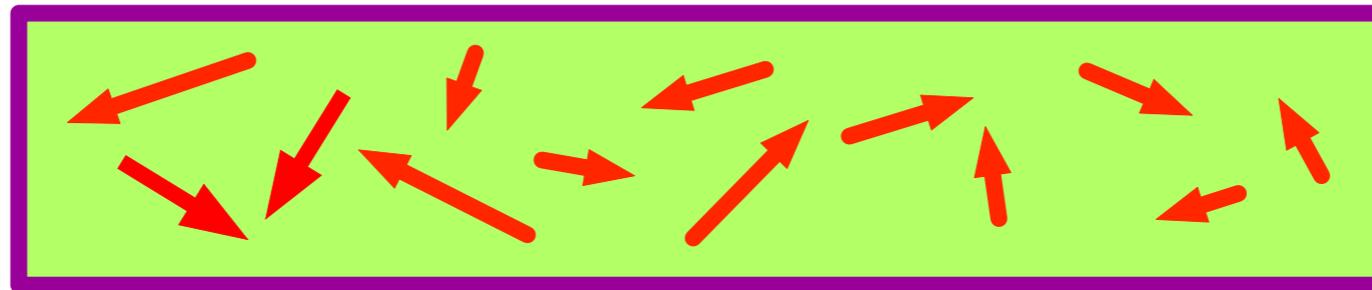


Wärmeleitung

Gasmodell

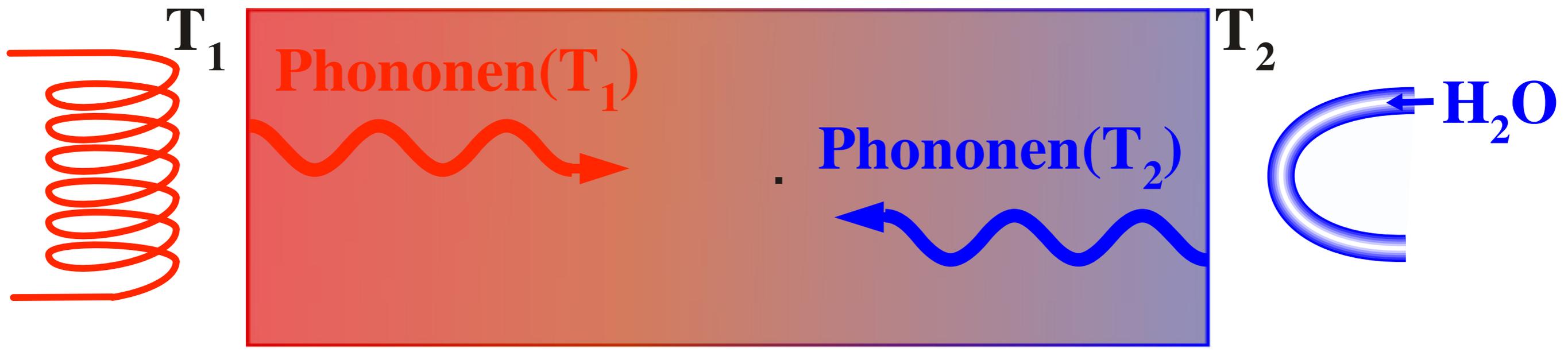
heisses
Ende



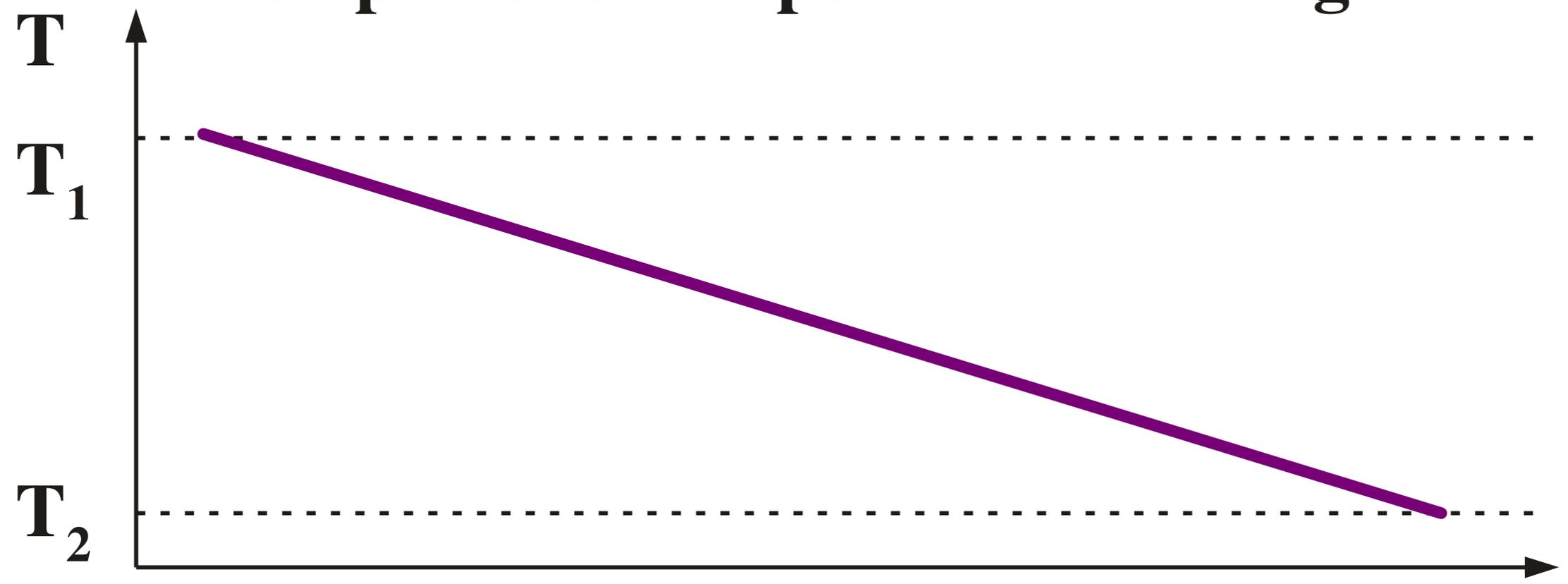
kaltes
Ende

Energietransport ohne Massentransport

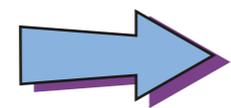
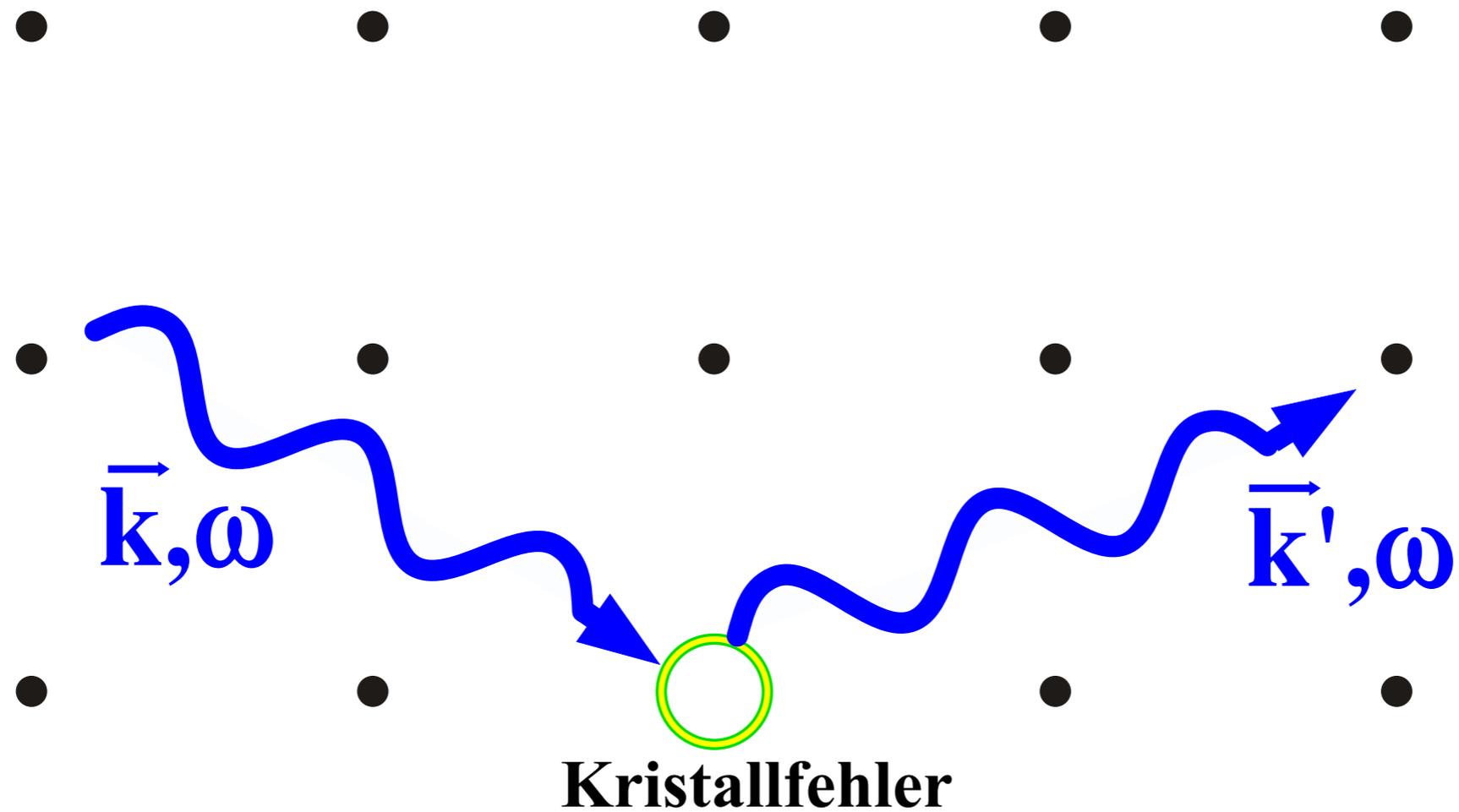
Wärmeleitung



empirische Temperaturverteilung

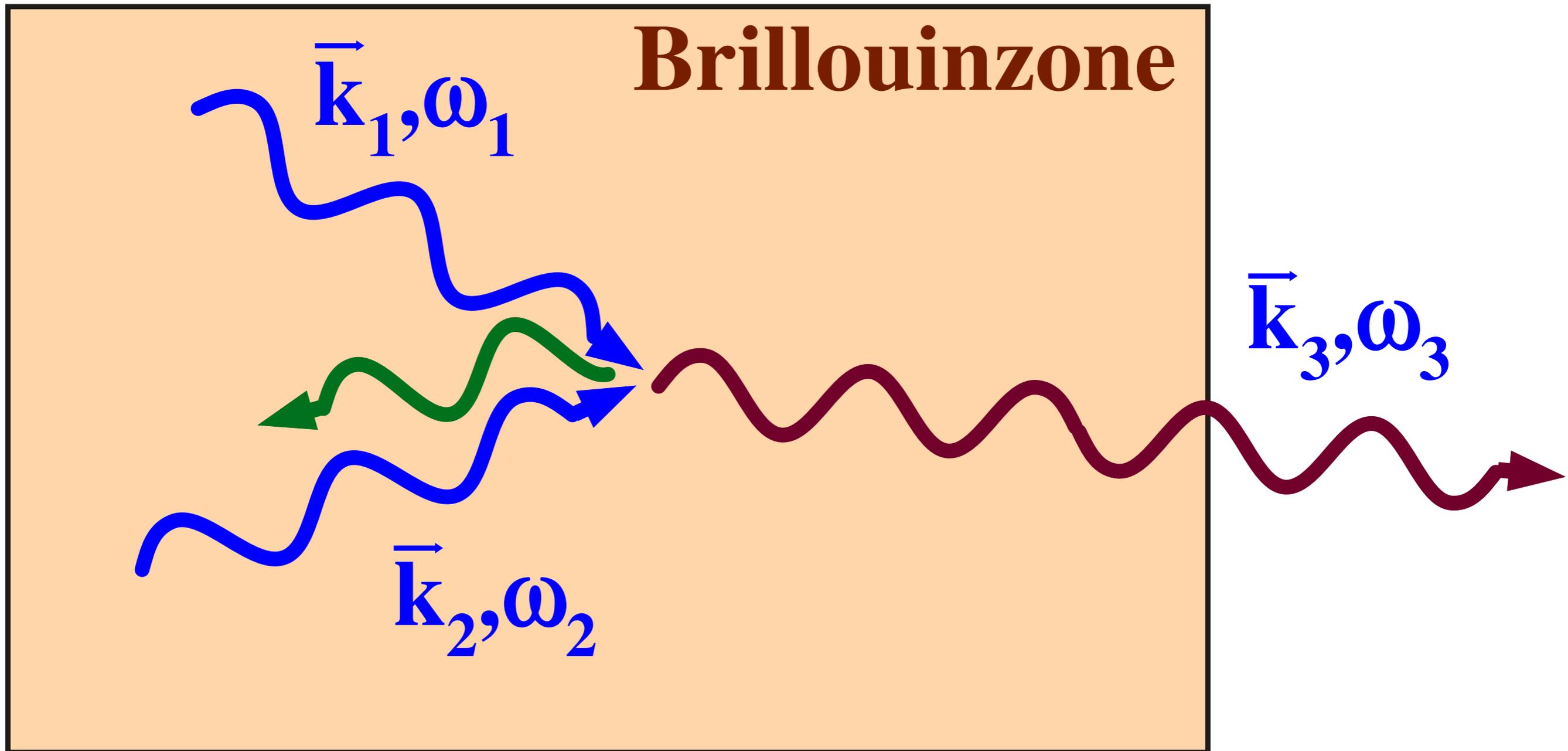


Phononenstreuung



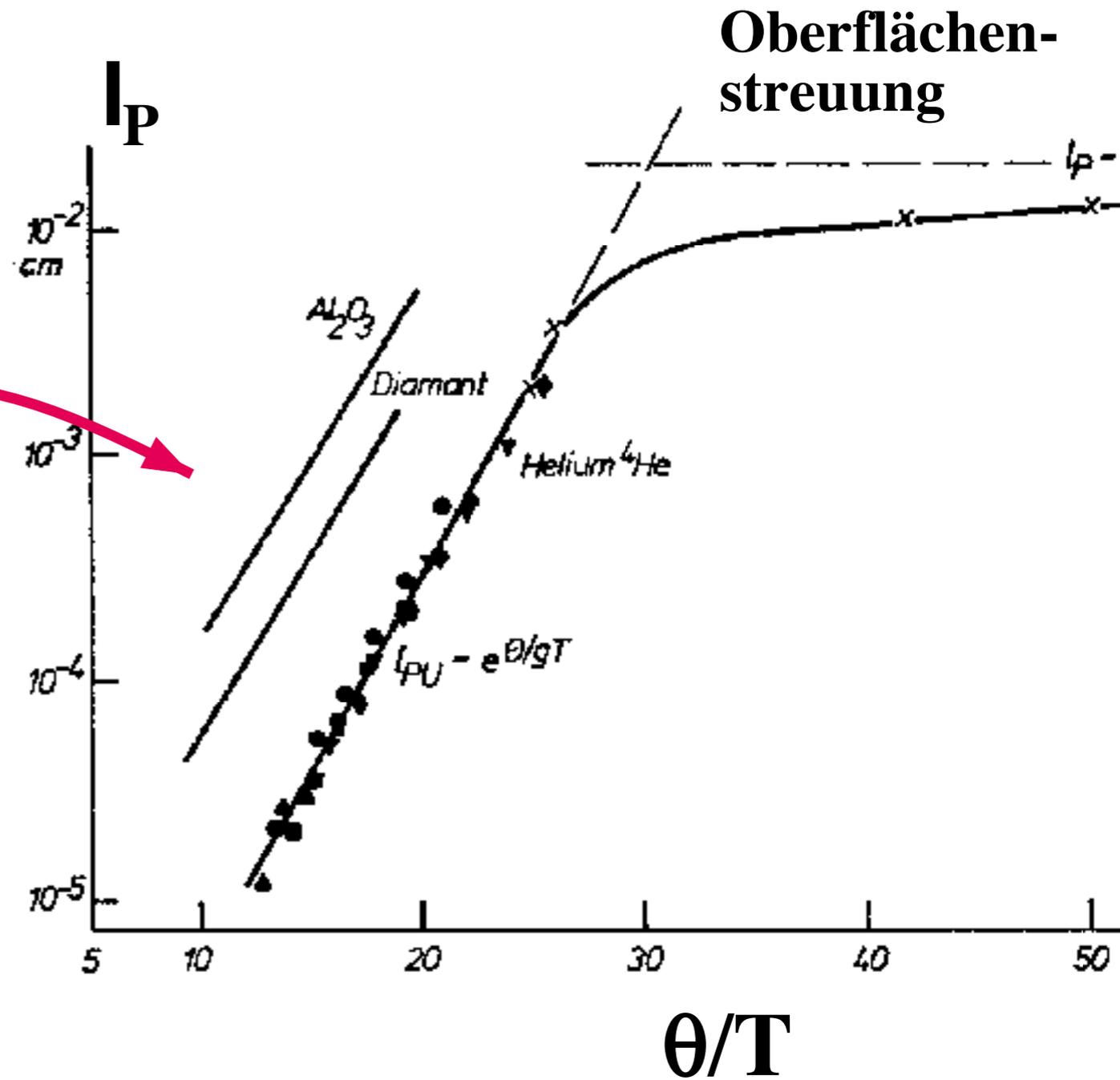
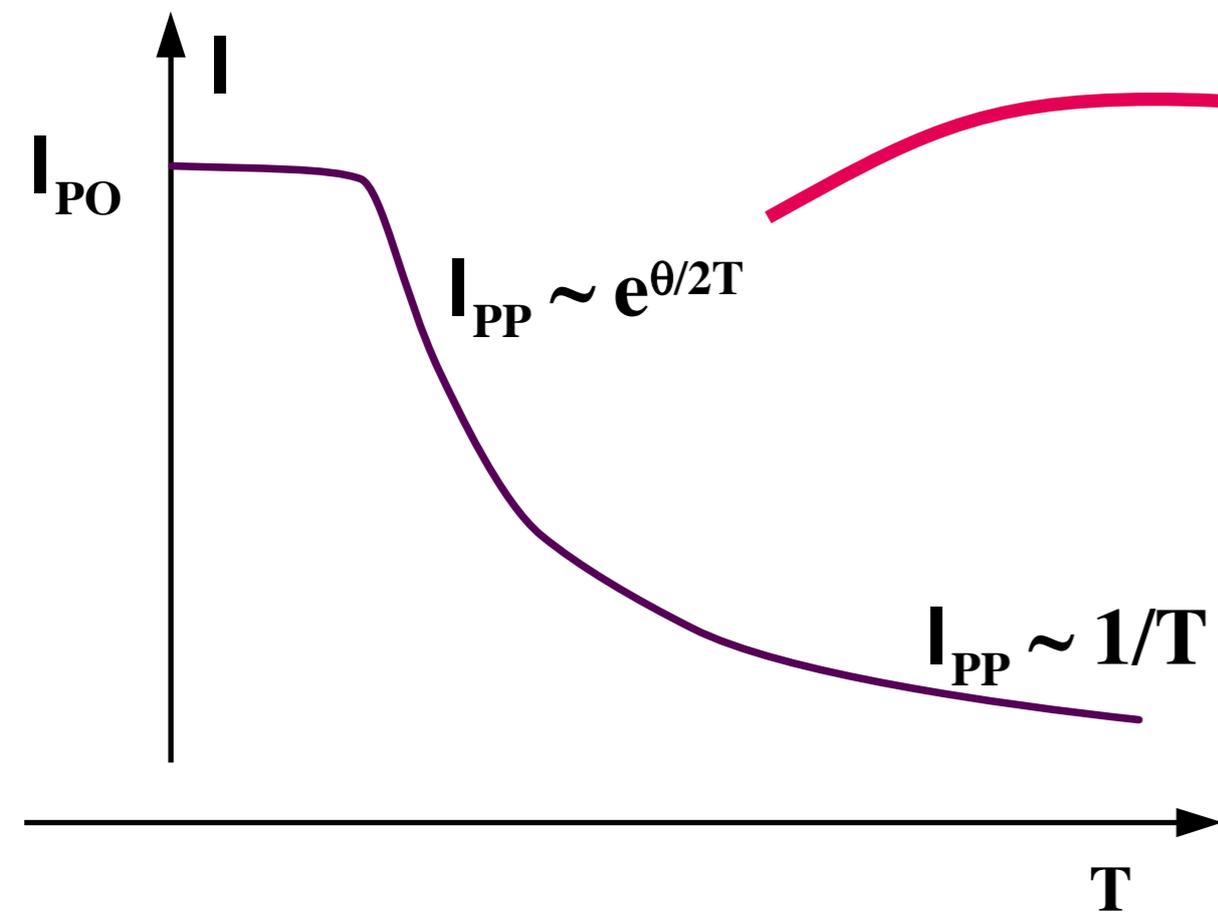
**Phononenenergie konstant
keine Thermalisierung !**

Umklappprozess



$$\vec{k}_1 + \vec{k}_2 = \vec{k}_3 + \vec{G}$$

Freie Weglänge

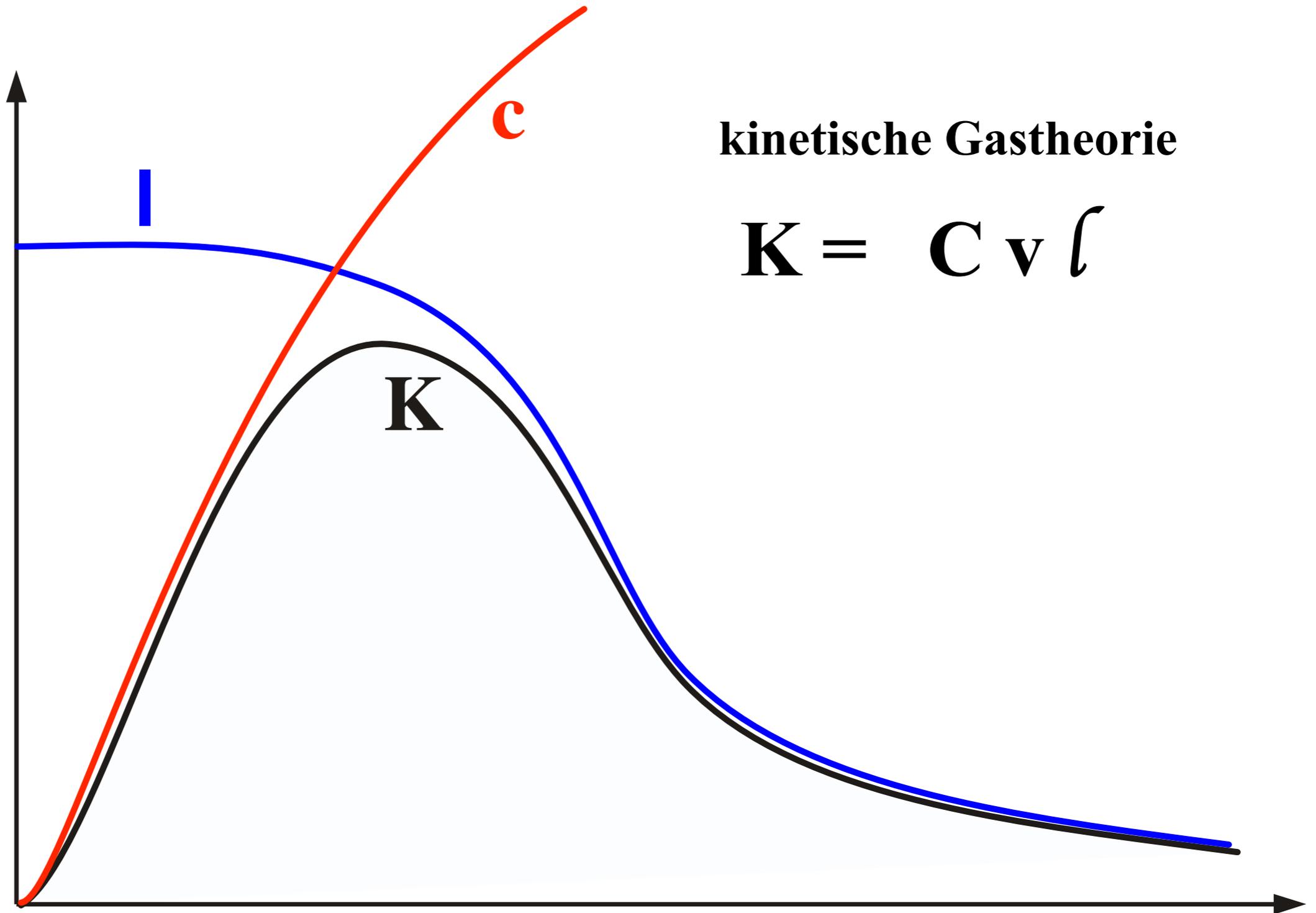


Wärmeleitfähigkeit (T)

freie Weglänge l

Wärmekapazität c

Wärmeleitfähigkeit K



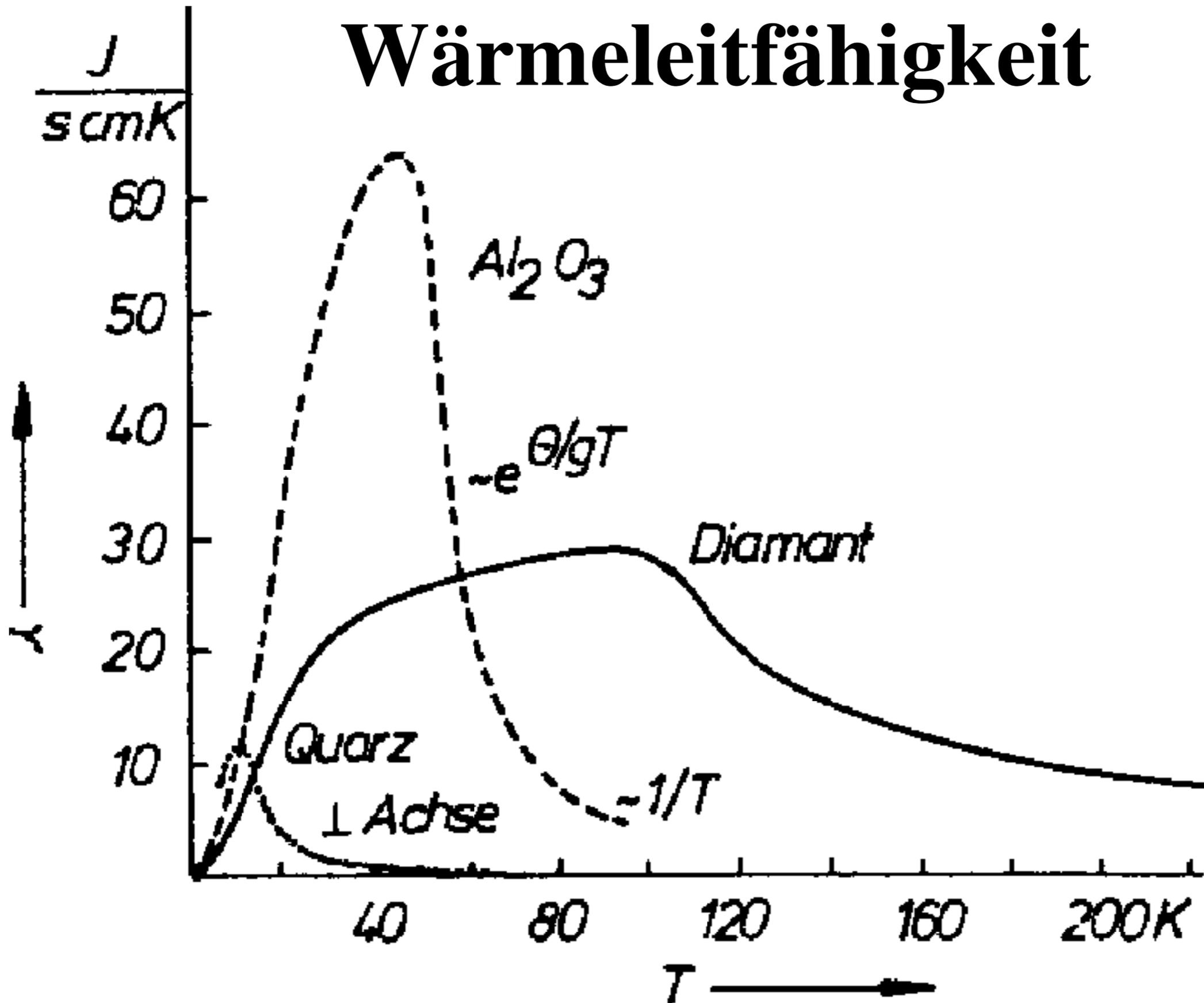
kinetische Gastheorie

$$K = C v l$$

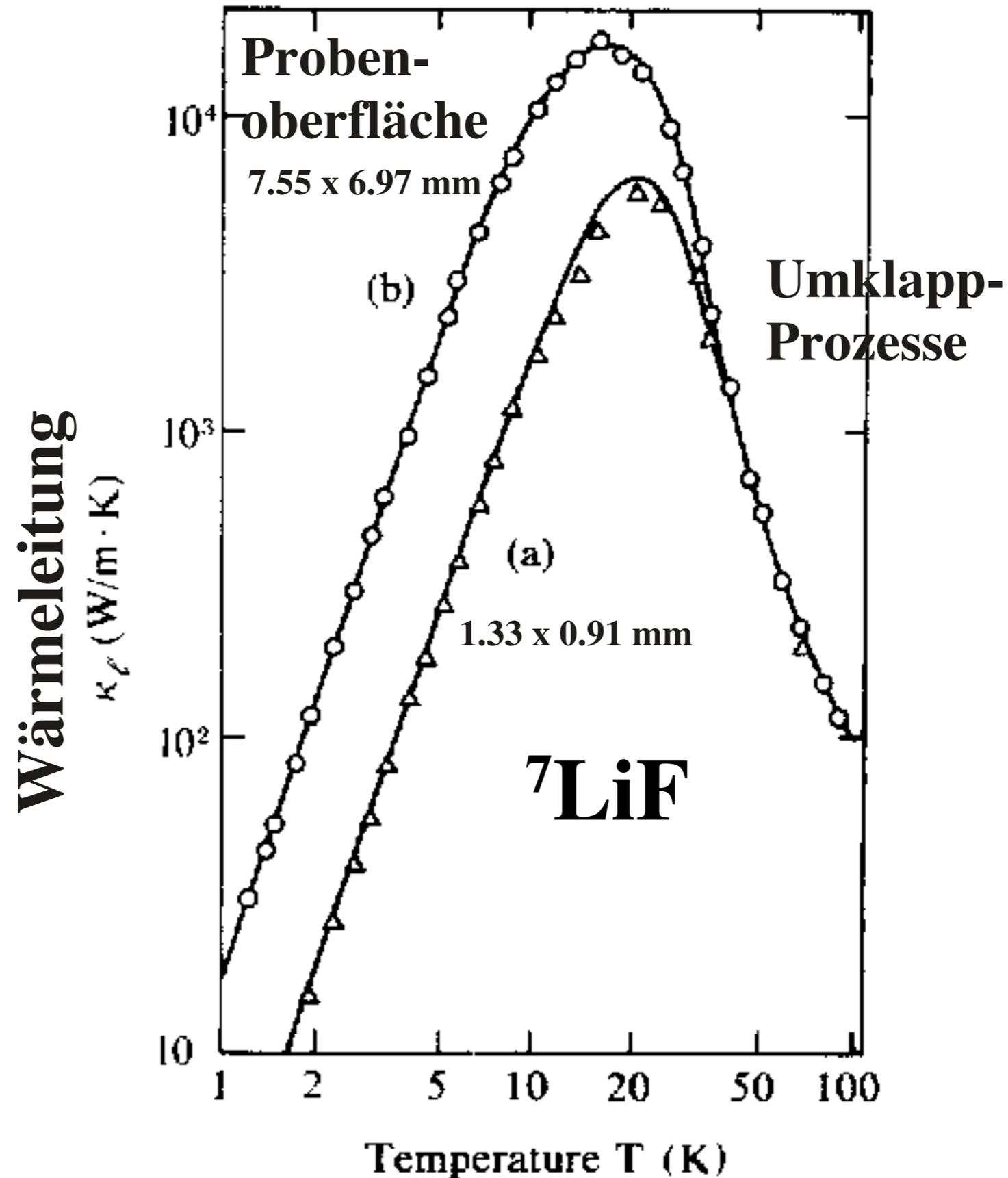
Temperatur

Temperaturabhängigkeit

Wärmeleitfähigkeit



Beiträge zur Wärmeleitung



Isotopeneffekt

