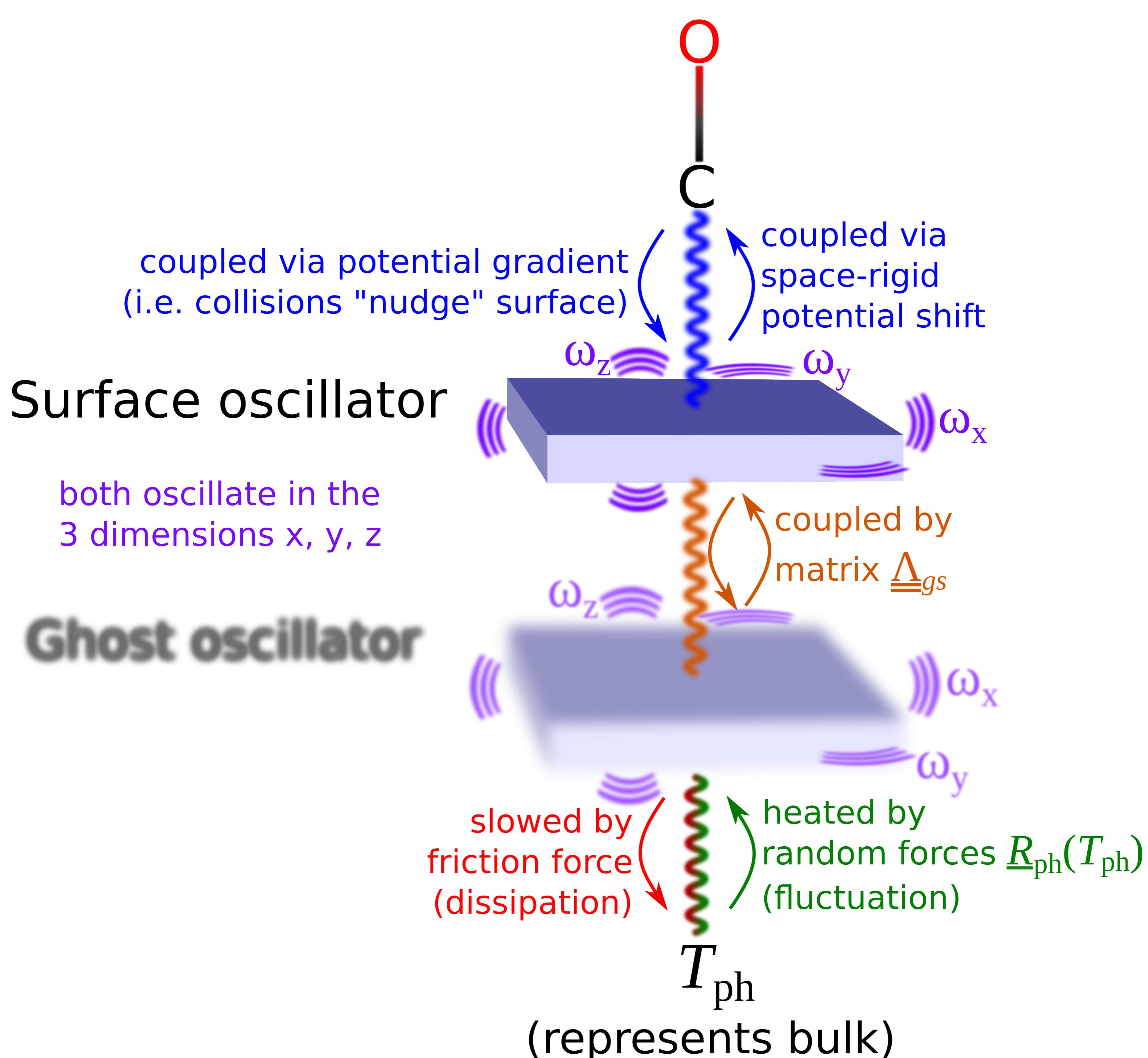


More details on the GLO model



- Equations of motion for surface oscillator \underline{r}_s and ghost oscillator \underline{r}_g :

$$m_s \frac{d^2 \underline{r}_s}{dt^2} = \underbrace{-\nabla_s V(\underline{r}_1 - \underline{r}_s, \underline{r}_2 - \underline{r}_s)}_{\text{Force due to PES}} - m_s \underline{\underline{\Omega}}^2 \underline{r}_s + m_s \underline{\underline{\Lambda}}_{gs} \underline{r}_g$$

Harmonic oscillator

Coupling to ghost oscillator

$$m_s \frac{d^2 \underline{r}_g}{dt^2} = \underbrace{-m_s \underline{\underline{\Omega}}^2 \underline{r}_g}_{\text{Harmonic oscillator}} + \underbrace{m_s \underline{\underline{\Lambda}}_{gs} \underline{r}_s}_{\text{Coupling to surface oscillator}} - \underbrace{\eta_{ph} \frac{d \underline{r}_g}{dt}}_{\text{Friction force}} + \underbrace{R_{ph}(T_{ph})}_{\text{Random forces}}$$

Harmonic oscillator

Coupling to surface oscillator

Friction force

Random forces

Contact information Robert Scholz:

Adress: Haus 25, Raum D2.04/05, Institut für Chemie, Universität Potsdam, Karl-Liebknecht-Str. 24-25, D-14476 Potsdam

Tel.: 0331-977-5368

Email: robscholz87@hotmail.com