

**Figure S3. Parameter likelihood profiles for the estimated dynamic parameters deduced from the substrate channeling model.**

The profile likelihood, 2, is plotted over a range of parameter values around the estimated optimal value marked by a dot. As reference, the 68 % / 90 % / 95 % confidence level (CL) thresholds corresponding to 2 = 1 / 2.71 / 3.84 are given as horizontal lines.