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Supporting information for article:

Crystallization via tubing microfluidics permits both *in situ* and *ex situ* X-ray diffraction

Charline J. J. Gerard, Gilles Ferry, Laurent M. Vuillard, Jean A. Boutin, Leonard M. G. Chavas, Tiphaine Huet, Nathalie Ferte, Romain Grossier, Nadine Candoni and Stéphane Veesler

Solubilities at 20°C are measured by equilibrating crystal-solution suspensions (initial volume of 40µL) over time as described in (Veesler *et al.*, 2004).

QR2 solutions are buffered at pH=8 (20mM Tris-HCl and 150mM NaCl). QR2 concentrations were checked by optical density measurements (Biochrom, Libra S22) using an extinction coefficient of 1.74 $mL.mg^{-1}.cm^{-1}$ at 280 nm (Gasteiger *et al.*, 2003).

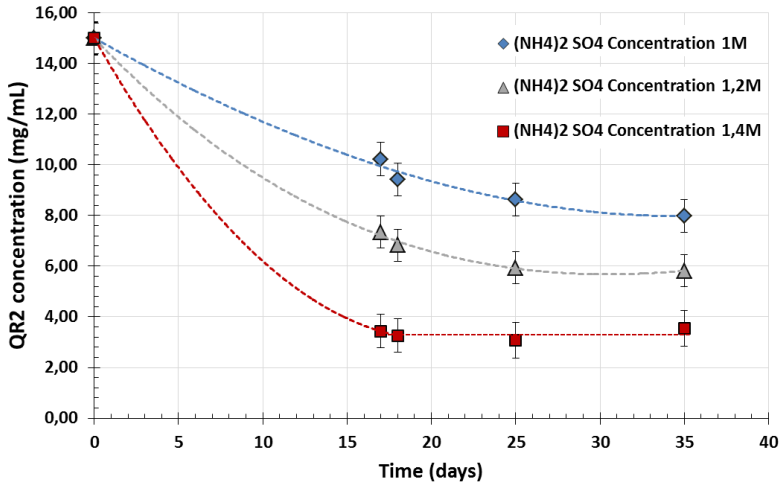

Figure S1 QR2 concentration vs time for 1, 1.2 and 1.4M $(NH_4)_2SO_4$ at 20°C. The plateaus after 20 days correspond to crystal-solution equilibrium, i.e. solubility. The solubility curve was plotted using a polynomial function of order 3.

Crystallography All diffraction data were recorded on a Pilatus-6M (Dectris®) detector at the beamline PROXIMA-1 from the Synchrotron SOLEIL (Paris, France), at the default energy of 12.67 keV, and sample-to-detector distance of 440.5 mm. For *in situ* measurements, the silica-tube containing the crystalline sample was adapted to a magnetic-base of the SPINE-geometry. Crystals were centred to the x-ray beam position using a 3-axis goniometer (SmarGon, SmarAct GmbH), either frozen under a cryo-jet set at 100K or kept at room temperature.

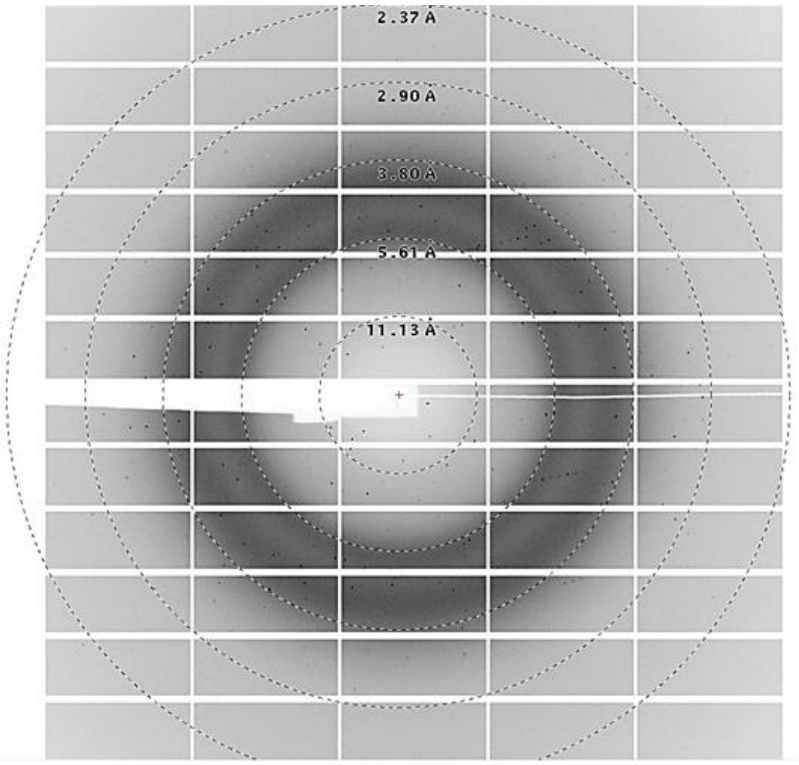

Figure S2 Diffraction pattern of QR2 taken at room temperature from the droplet inside the silica tube. The image illustrates the sum of ten wedged images collected each over an oscillation angle of 0.1º.

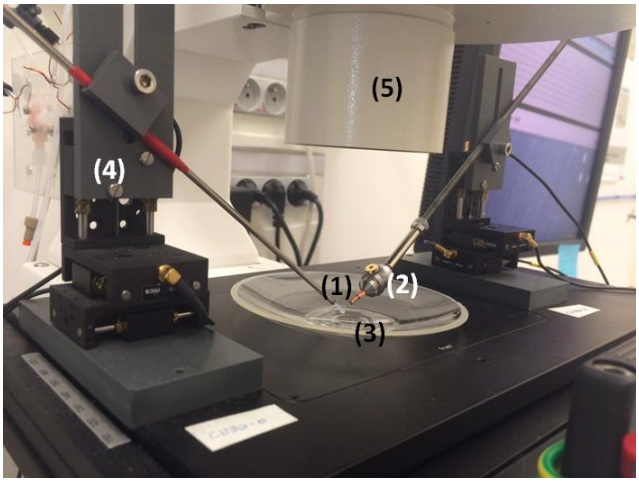

Figure S3 Photos of the micromanipulators (1): tube holder, (2): Micromesh™, (3): FC-70 oil, (4): XYZ miniature translation stage and (5): microscope.

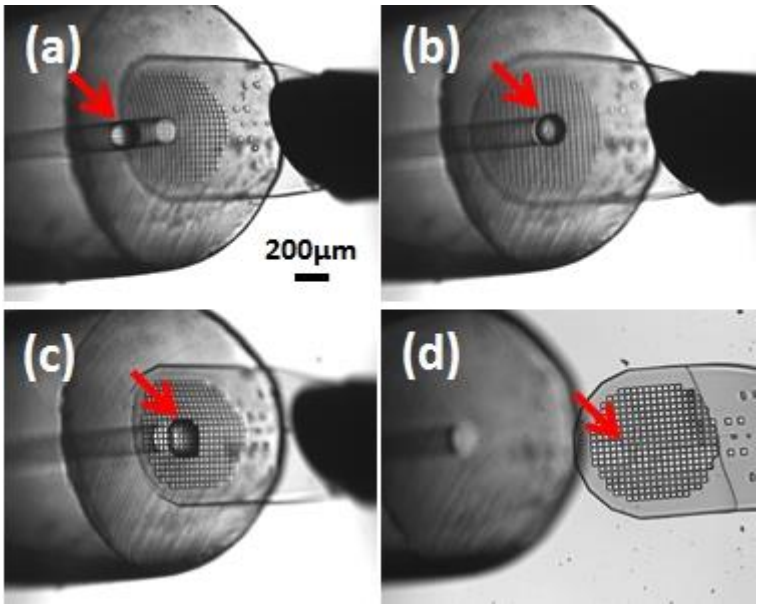

Figure S4 Time sequence of a droplet deposition on a Micromesh™.