

Structure of a large colloidal crystal - controlling orientation and three-dimensional order

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Supporting information

	PS3	PS4	PS11
Styrene / g	73.42	73.12	73.04
Potassium persulfate, $K_2O_8S_2$ / g	0.50	0.62	0.60
Sodium dodecyl sulfate / g	1.01	1.11	2.10
H_2O / g	718	718	718
Temperature / °C	60	70	70

Table I. Syntheses for different polystyrene latices.

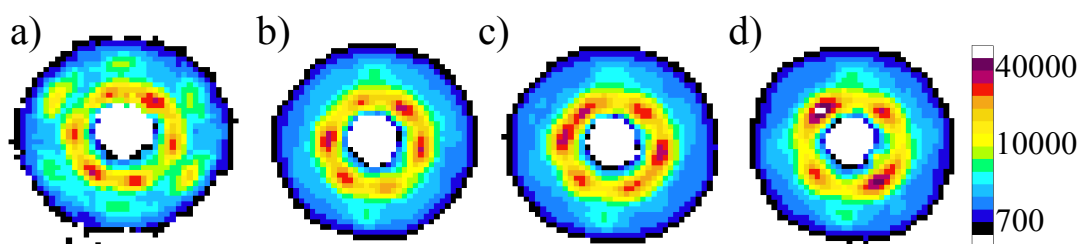


Figure I. Scattering patterns resulting from ω -rotations of the cell of a) 0, b) 15, c) 30 and d) 45 degrees.

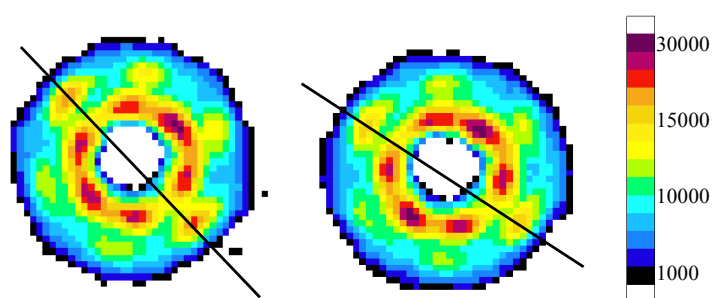


Figure II. Two-dimensional scattering patterns where the right pattern has χ rotation set to zero, compared with the left pattern where $\chi = 12.5$ degrees. ω and ϕ set to zero for both scattering patterns. The χ -axis rotates the scattering pattern in the plane of the detector.

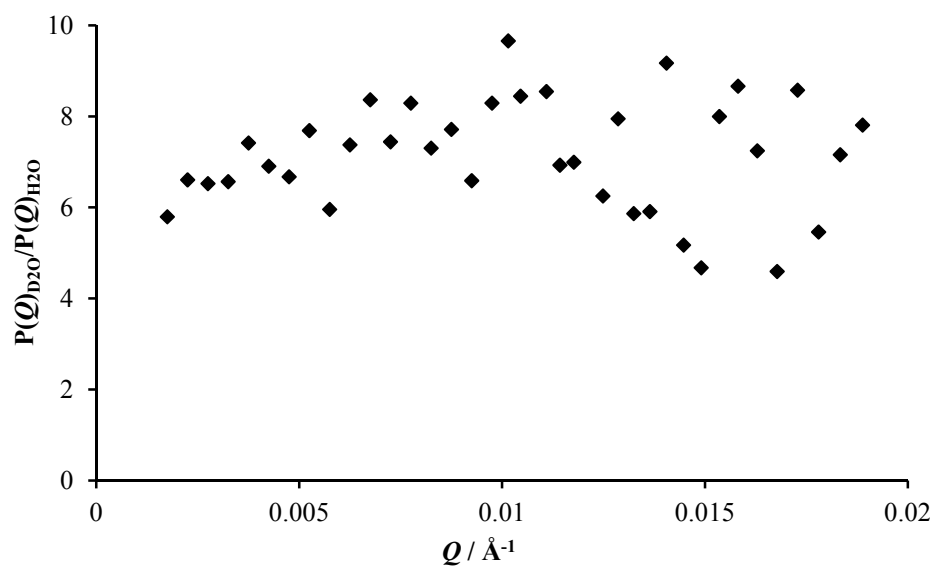


Figure III. Ratio between the measured form-factor in two different contrasts. The calculated value of ratio obtained from the different scattering contrast is 6.29 and is in reasonable agreement with the measurements shown.