

Supplementary 1

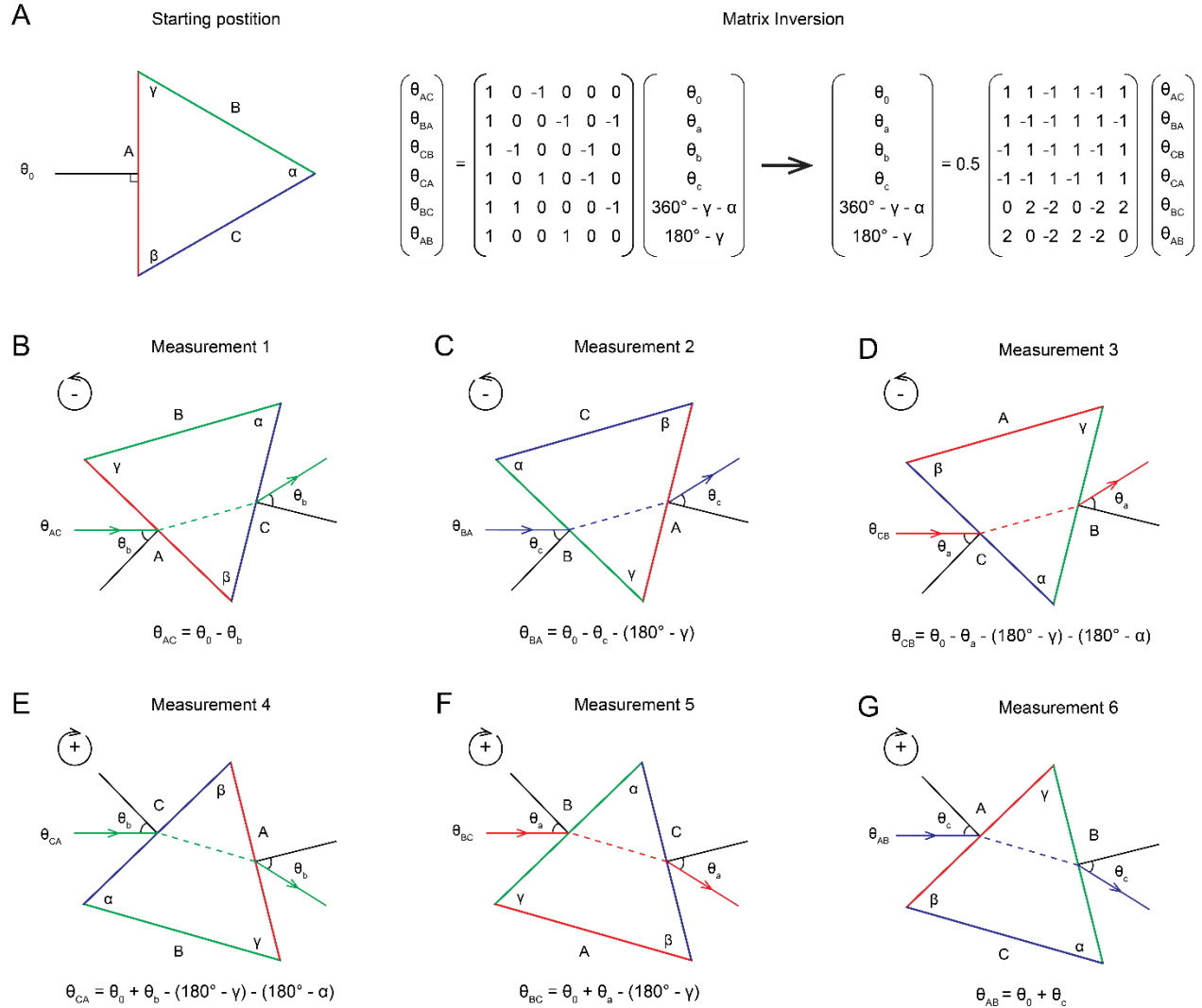


Figure 1: Angles as mentioned in Method. A, B and C are the prism faces, α , β and γ are the prism angles, θ_0 is the (arbitrary) origin angle of the rotary table, θ_a , θ_b and θ_c are the angles of incidence (and emergence) for the angle of minimum deviation of each prism angle, and θ_{AC} , θ_{BA} , θ_{CB} , θ_{CA} , θ_{BC} , θ_{AB} are the angles measured with the calibrated rotary table at the angle of minimum deviation (so not the angles of minimum deviation themselves). A) Step 1: the prism is in starting position θ_0 . B) Step 2: the prism is rotated θ_b in negative direction to determine θ_{AC} . C) Step 3: the prism is rotated $(180^\circ - \gamma)$ to determine θ_{BA} . D) Step 4: the prism is rotated $(180^\circ - \alpha)$ to determine θ_{CB} . E) Step 5: the prism is rotated $2 \times \theta_b$ in positive direction to determine θ_{CA} . F) Step 6: the prism is rotated $(180^\circ - \alpha)$ to determine θ_{BC} . G) Step 7: the prism is rotated $(180^\circ - \gamma)$ to determine θ_{AB} . Step 8: The equations 2-7 are put in a matrix inversion (Figure 1A) to derive equations 8-13.

Supplementary 2

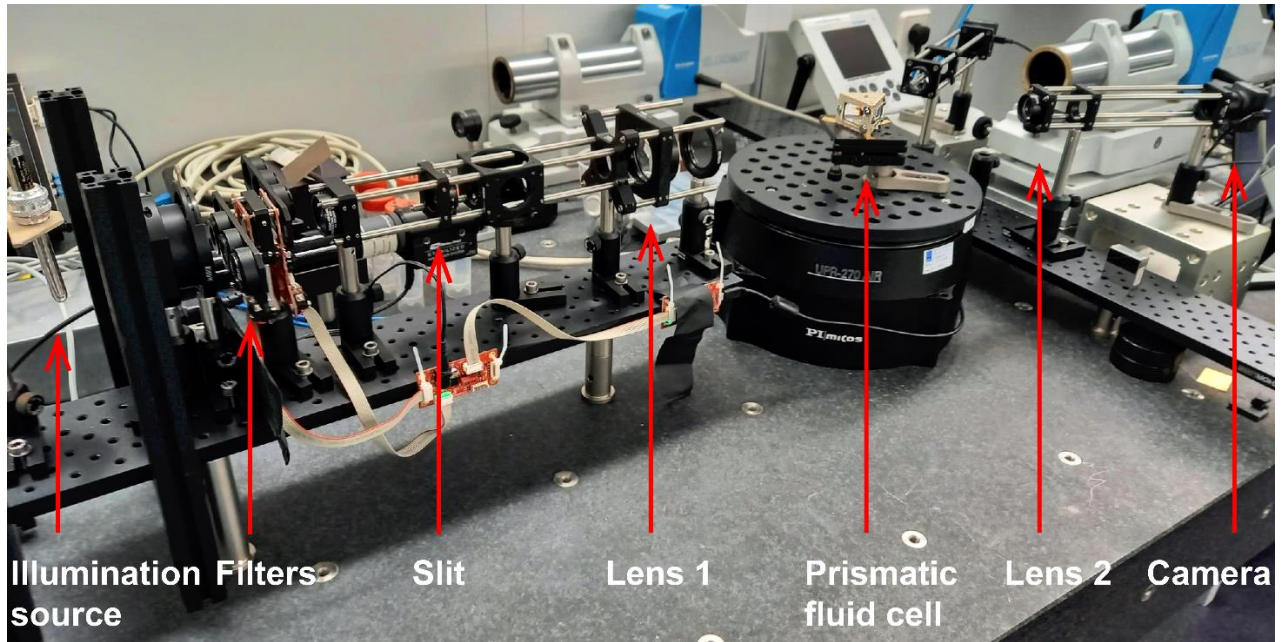


Figure 2: Picture of the refractive index measurement set-up as described in Methods. The set-up with from left to right the illumination source, filter, slit, collimating lens (lens 1), rotary table with the equilateral prism on top, focusing lenses (lens 2) and cameras. Spectral lines from a mercury source are filtered to select wavelengths 404.66 nm, 435.83 nm, 546.07 nm, and 579.07 nm. Filtered light passes through a 200- μ m slit and is collimated by a positive achromatic doublet lens, lens 1, with a focal length of 200 mm before passing through a prismatic fluid cell mounted on a rotary table. After passing the prism, the light is focused on a camera using a positive singlet lens, lens 2, with a focal length of 200 mm.