Electronic Supplementary Material (ESI) for Soft Matter.

Supporting Information for: Laning, Thinning and Thickening of Sheared Colloids in a Two-dimensional Taylor-Couette Geometry

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SUPPORTING VIDEOS

The following five videoclips support Figs. 1, 2 and 4.

- **VideoS1**(.WMV) This videoclip illustrates the dynamics of a colloidal cluster subjected to a clockwise rotating magnetic field with amplitude $B_0 = 1.5$mT and frequency $\Omega = 125.7$rads^{-1}. The outer colloidal layer is rotated by the AOD in counter-clockwise direction at an angular velocity of $\omega_4 = -0.6$rads^{-1}. The video corresponds to the situation (b) in Fig.2 of the article.

- **VideoS2**(.WMV) This video shows a colloidal cluster where the inner magnetic trimer is subjected to a counter-clockwise rotating field of amplitude $B_0 = 0.65$mT and frequency $\Omega = 125.7$rads^{-1}, while the outer particles are not rotated ($\omega_4 = 0$rads^{-1}). The video corresponds to the Fig.1 of the article.

- **VideoS3**(.WMV) This video shows a colloidal cluster where both the inner trimer ($B_0 = 1.25$mT, $\Omega = 125.7$rads^{-1}) and the outer layer ($\omega_4 = 0.4$rads^{-1}) are rotated in clockwise direction. The video corresponds to Fig.1 of the article.

- **VideoS4**(.WMV) This video shows a colloidal cluster where the outer particles are not rotated ($\omega_4 = 0$rads^{-1}), while the inner trimer is subjected to a counter-clockwise rotating field with $B_0 = 1.1$mT and frequency $\Omega = 125.7$rads^{-1} The video corresponds to Fig.4 of the article.

- **VideoS5**(.WMV) Videoclip showing a colloidal cluster with the inner trimer subjected to a counter-clockwise rotating field with $B_0 = 4.2$mT and $\Omega = 125.7$rads^{-1}, while the outer particles are not rotated ($\omega_4 = 0$rads^{-1}). The video corresponds to Fig.4 of the article.

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