Supplementary Information (SI) for Soft Matter.

SUPLEMENTAR MATERIAL FOR: Emergence of Synchronization-Induced Patterns in Two-dimensional Magnetic Rod Systems under Rotating Magnetic Fields

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Suplementary movies

Movie A1: Swarming of magnetic rods with an aspect ratio $l = 2$ in the High Synchronization regime for $B_0 = 50$ and $\omega_0 = 5$. The large blue rod represents the external magnetic field's rotation. This movie is sped up by a factor of 75.

Movie A2: Magnetic rods with an aspect ratio $l = 4$ in the High Synchronization regime for $B_0 = 50$ and $\omega_0 = 5$. The large blue rod represents the external magnetic field's rotation. This movie is sped up by a factor of 17.

Movie A3: Magnetic rods with an aspect ratio $l = 2$ in the Intermediate Synchronization regime for $B_0 = 30$ and $\omega_0 = 30$. The large blue rod represents the external magnetic field's rotation. This movie is sped up by a factor of 1.4.

Movie A4: Magnetic rods with an aspect ratio $l = 3$ in the Intermediate Synchronization regime for $B_0 = 50$ and $\omega_0 = 30$. The large blue rod represents the external magnetic field's rotation.

Movie A5: Magnetic rods with an aspect ratio $l = 4$ in the Intermediate Synchronization regime for $B_0 = 50$ and $\omega_0 = 30$. The large blue rod represents the external magnetic field's rotation. This movie is sped up by a factor of 7.

Movie A6: Magnetic rods with an aspect ratio $l = 3$ in the Low Synchronization regime for $B_0 = 10$ and $\omega_0 = 30$. The large blue rod represents the external magnetic field's rotation. This movie is sped up by a factor of 25.