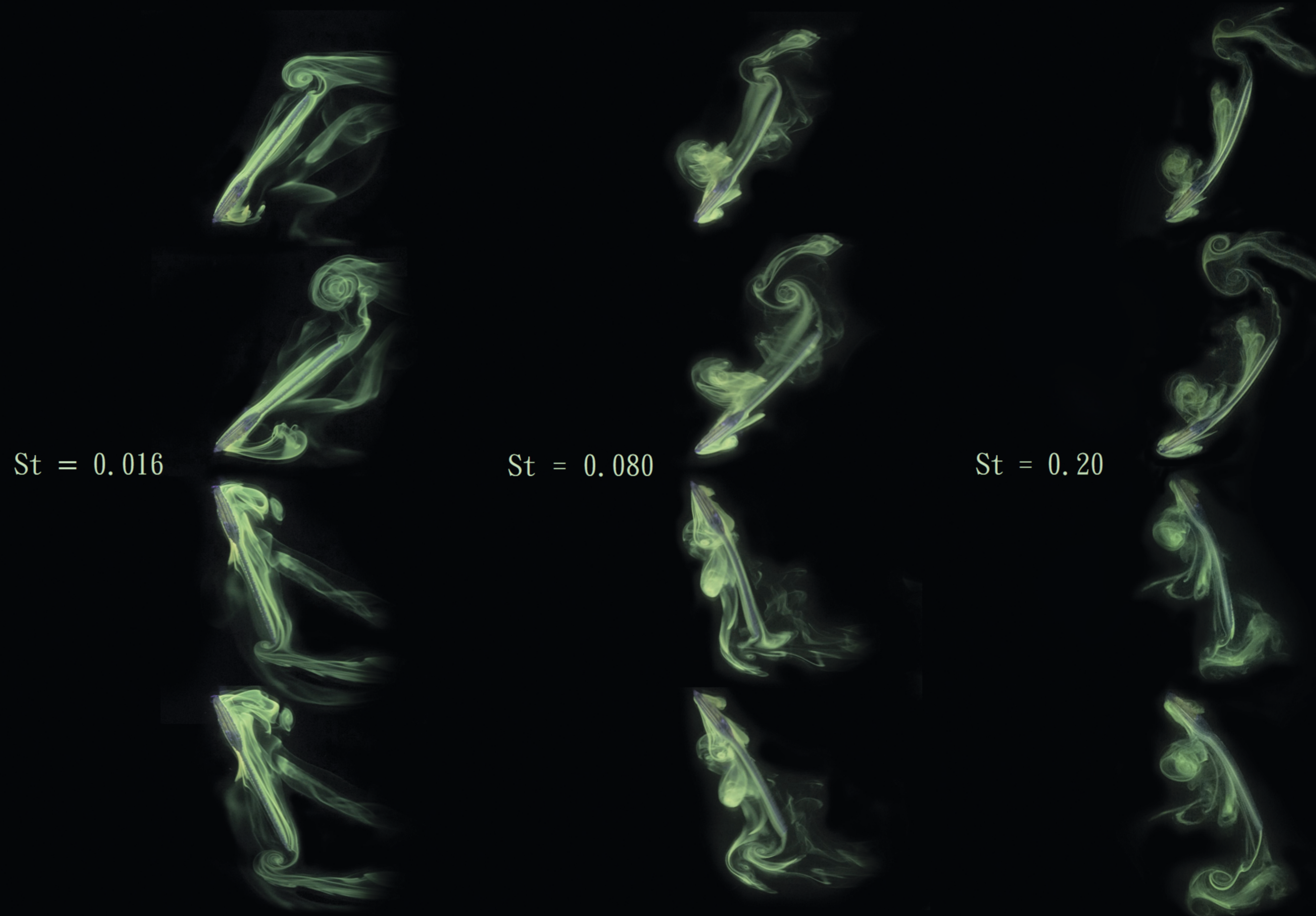


Nature-inspired passive and active kinematics of a flapping foil

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Carangiform tails take a major role in generation of the total thrust of aquatic animals. Carangiform locomotion is modeled as heaving and pitching motions of a flexible foil, and dye visualizations are performed at Reynolds number of 3850 ($Re = U_\infty c/\nu$). Flexibility effects on wake structure are illustrated with various Strouhal numbers ($St = fc/U_\infty$).