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Confined colloidal droplets dry to form circular mazes

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Pattern recognition is fundamental to human nature that has allowed humanity to evolve and thrive. As a result, we have a natural affinity for patterns that exist all around us in the natural world, from honeycomb to constellations. Here, we present the pattern formation of colloidal droplets allowed to dry slowly in a vertical confinement. The pattern left behind is a unique labyrinth of colloidal fingers, showing multiple length scales. While some similar patterns have been observed before, the driving forces behind this process are distinctly different to, for example, frictional finger formation observed in granular systems.

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