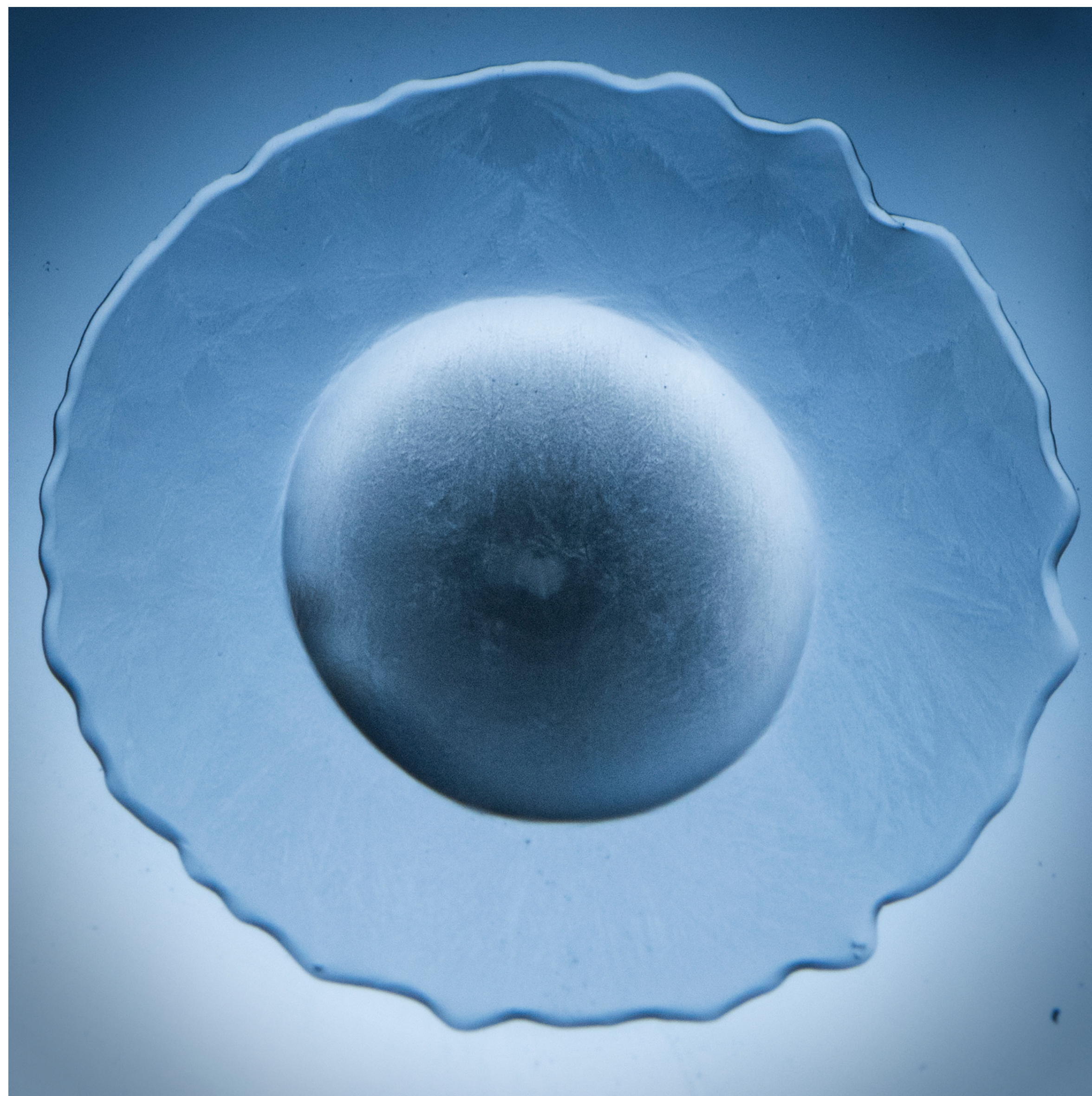


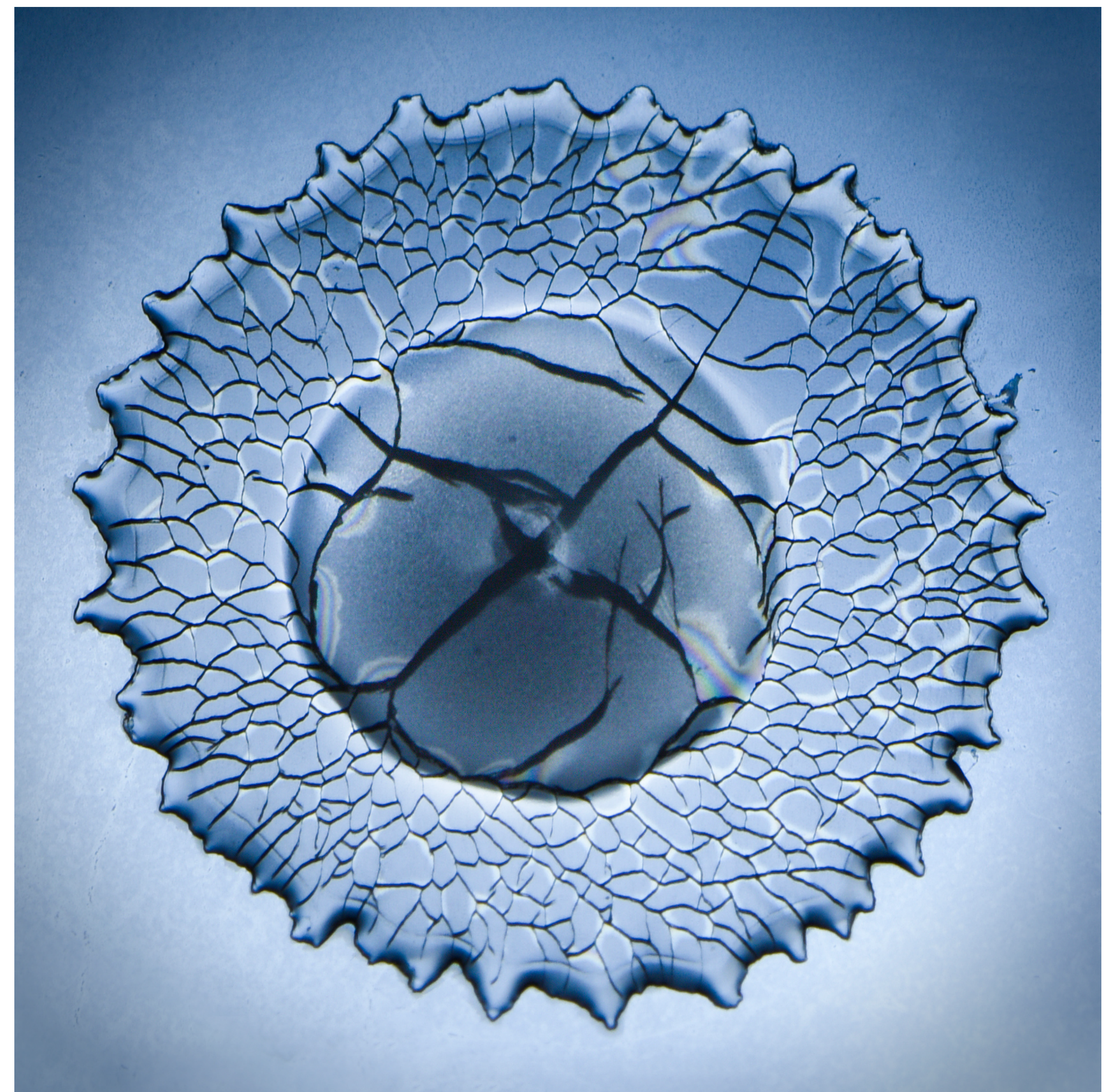
CRACK PATTERNS IN FREEZING WATER DROPS

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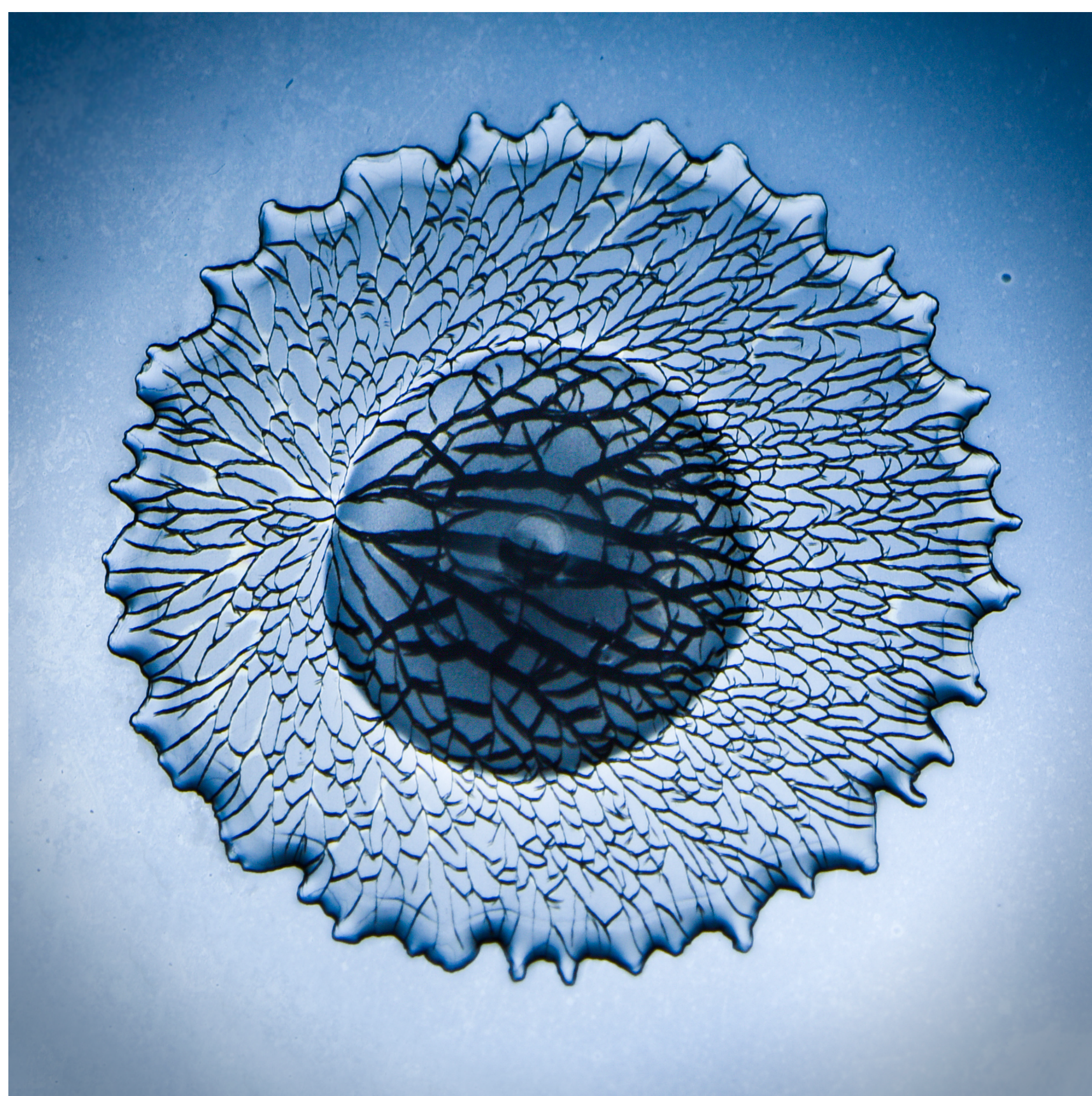
Water droplets landing on a cold surface spread and can fragment into different patterns as they freeze, depending on the temperature of the surface. The frozen drop presents either a smooth face with no fractures, many small cracks emanating from a single nucleation point, or step-by-step fractures in which fewer, larger cracks occur at roughly right angles to one another. Freezing also promotes contact line destabilization and, at such low temperature, can even trigger drop splashing.



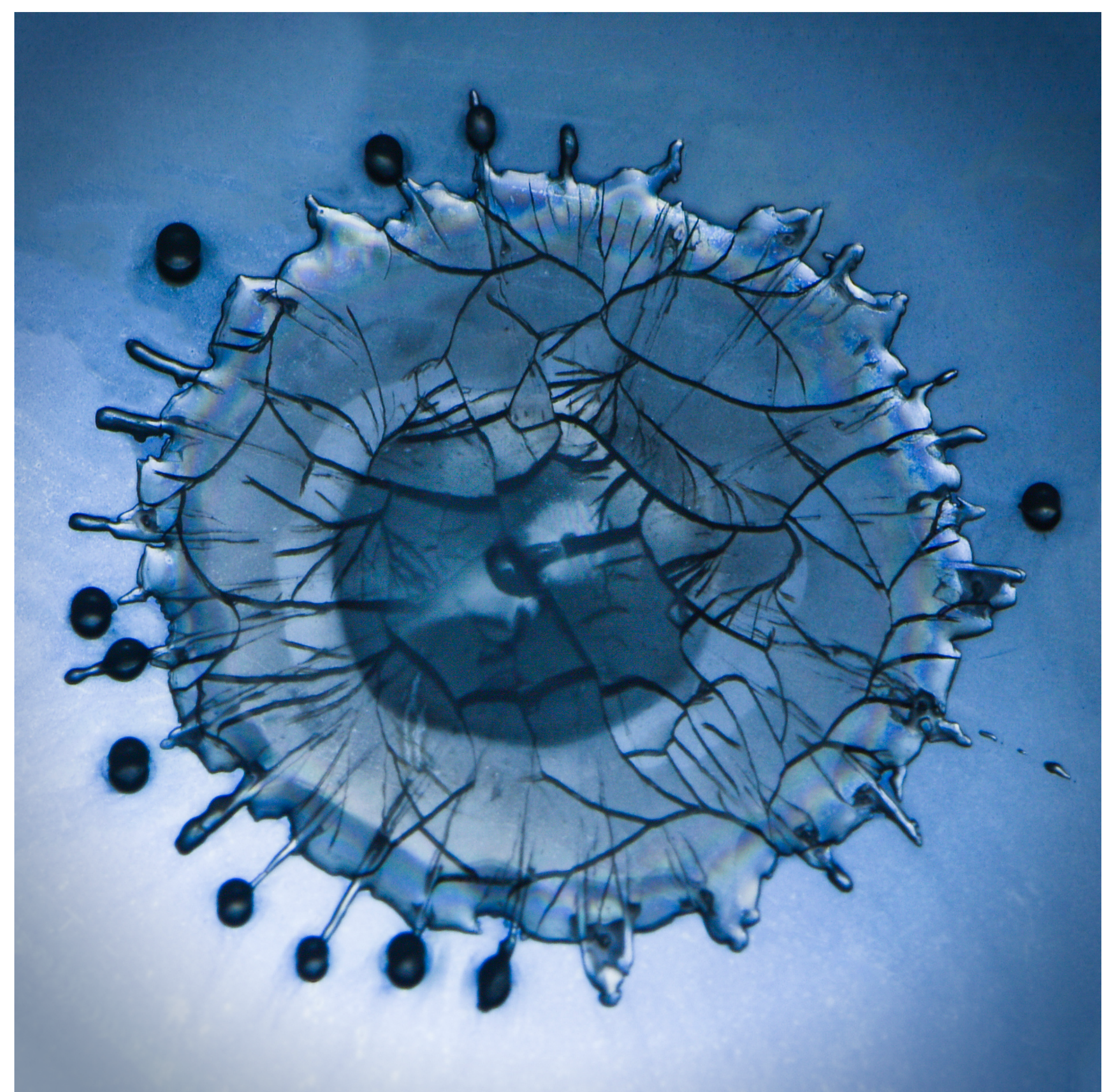
0°C -20°C



0°C -36°C



0°C -44°C



0°C -62°C