

Abstract Submitted  
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**Growth and collapse of laser-induced bubbles in gas-supersaturated gelatin gels.**<sup>1</sup> KEITA ANDO, NOBUYUKI NAKAMURA, Department of Mechanical Engineering, Keio University — We study, with experiments and theory, the growth and collapse of laser-induced bubbles in a gelatin gel. The gel sample is prepared so as to obtain gas supersaturation, according to a difference between heat and gas diffusion rates. Spherical gas bubbles are created by focusing a nano-second laser pulse at 532 nm into the gas-supersaturated gel. The bubble dynamics are recorded by a high-speed camera. To explore effects of the gel elasticity on the bubble collapse, the experimental observations are compared to an extended Rayleigh-Plesset model that accounts for linear/nonlinear elasticity of the gel surrounding bubbles.

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