



**Figure 3S-4.** Comparison of O<sub>2</sub> bubble nucleation from H<sub>2</sub>O<sub>2</sub> decomposition in steel fixtures and PDMS modified fixtures. O<sub>2</sub> bubbles nucleate and grow in steel fixtures. With PDMS modified steel fixtures, O<sub>2</sub> can diffuse into PDMS film, which helps prevent the development of O<sub>2</sub> bubbles.