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Cavitation activity in bacterial biofilms exposed to 1 MHz
ultrasound

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An exposure system was previously developed to quantify destruction of bacterial biofilms by 1 MHz c.w. ultrasound at 0.8 MPa peak-to-peak acoustic pressure amplitude (JASA 122(5):3052, 2007). Bacterial killing is quantified via confocal microscopy using fluorescent *E. Coli* and image processing. Recently, a passive detector of inertial and stable cavitation was included, relying upon the presence and character of acoustic emissions. The detector, a PVDF array placed on the microscope slide forming the base of the exposure chamber, produces a proxy measure of cavitation activity during ultrasound exposure. Acoustic pressure thresholds for biofilm destruction and cavitation activity suggest that inertial and stable cavitation both play a role in biofilm destruction by ultrasound.