Supporting Information

Microbubbles Cloaked with Hydrogels as Activatable Ultrasound Contrast Agents

Mary W. N. Burns[†,‖], *Robert F. Mattrey*[†,‡] *and Jacques Lux*[*,†,§,⊥]

† Department of Radiology, Translational Research in Ultrasound Theranostics (TRUST) Program, University of Texas Southwestern Medical Center, Dallas, Texas 75390, United States

‡ Advanced Imaging Research Center, Dallas, Texas 75390, United States

§ Biomedical Engineering Graduate Program, University of Texas Southwestern Medical Center, Dallas, Texas 75390, United States

‖ Biochemistry Graduate Program, University of Texas Southwestern Medical Center, Dallas, Texas 75390, United States

⊥ Organic Chemistry Graduate Program, University of Texas Southwestern Medical Center, Dallas, Texas 75390, United States

Corresponding Author

* Dr. Jacques Lux, Tel: (214) 648-5093. Fax: (214) 648-5097. E-mail address: Jacques.Lux@UTSouthwestern.edu

Figure S1. ^{1}H NMR spectrum of A-HA-SH ……..…… p: 3

Figure S2. Representative US images of HA-MBs and CPS signal activation ……. p: 4

Figure S3. Representative US images of imine-crosslinked MBs and CPS signal activation… p: 4

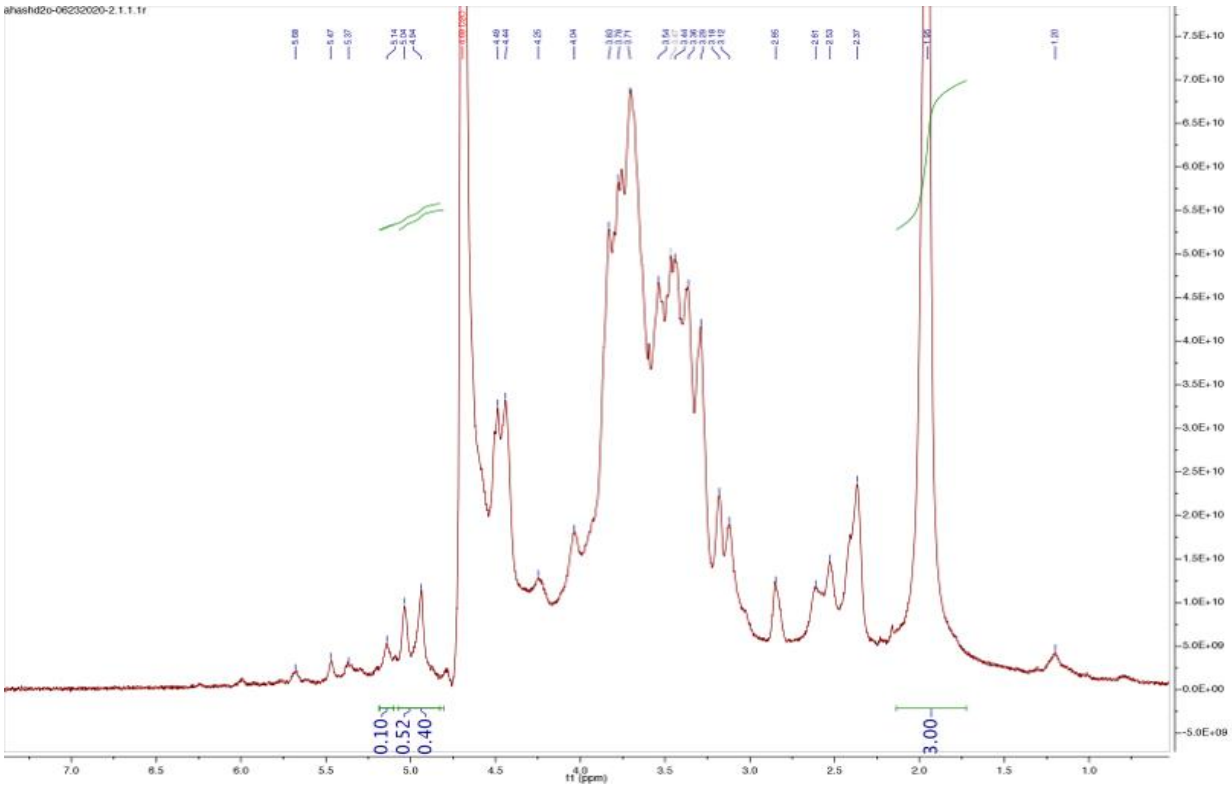

Figure S1. ^{1}H NMR spectra of A-HA-SH, showing characteristic aldehyde peaks.

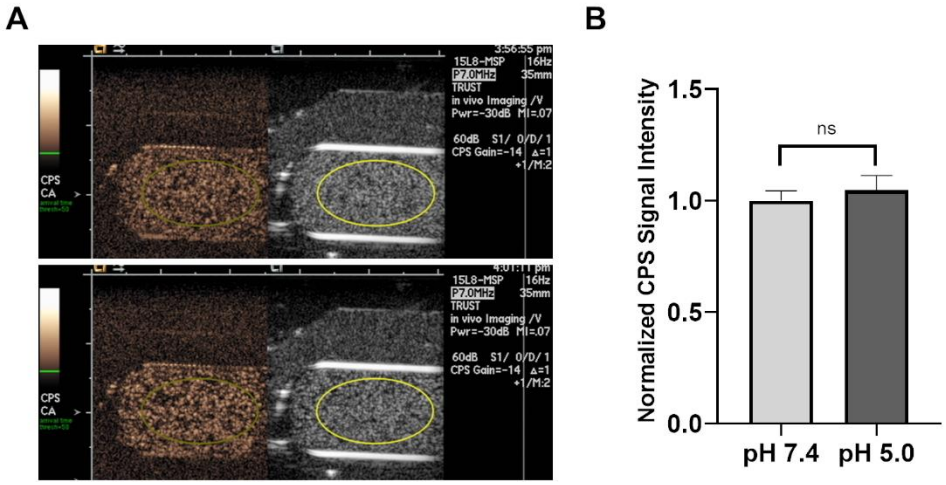

Figure S2. (A) Representative US images of HA-MBs before (top) and after (bottom) acidification and (B) CPS signal fold activation. ns = not statistically significant: $p > 0.05$ (n = 3). Error bars represent standard deviation.

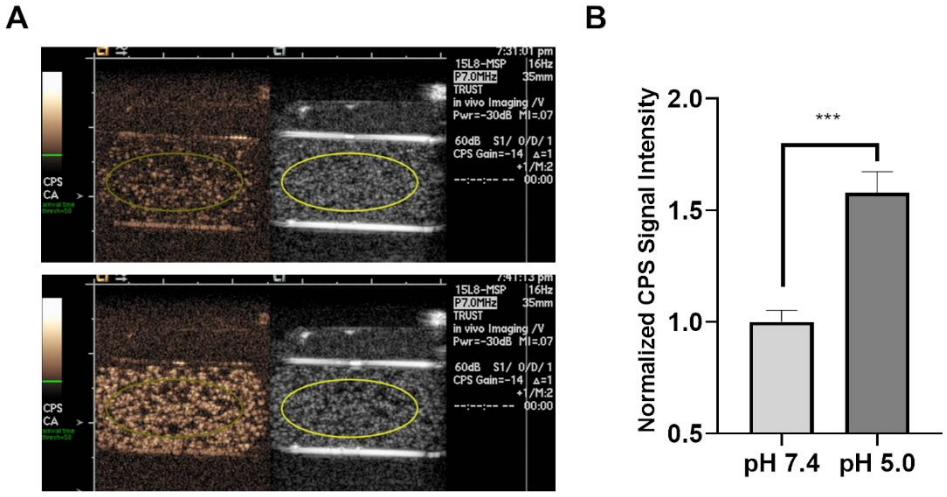

Figure S3. (A) Representative US images of imine-crosslinked pH-MBs before (top) and after (bottom) acidification and (B) CPS signal fold activation. ***$p < 0.001$ (n = 3). Error bars represent standard deviation.