

Supplementary Information for

**“Branching and size of CTAB-coated gold
nanostars control the colorimetric detection of
bacteria”**

Mohit S. Verma^{a,b,+}, Paul Z. Chen^{a,+}, Lyndon Jones^{a,c}, and Frank X. Gu^{a,b,*†}

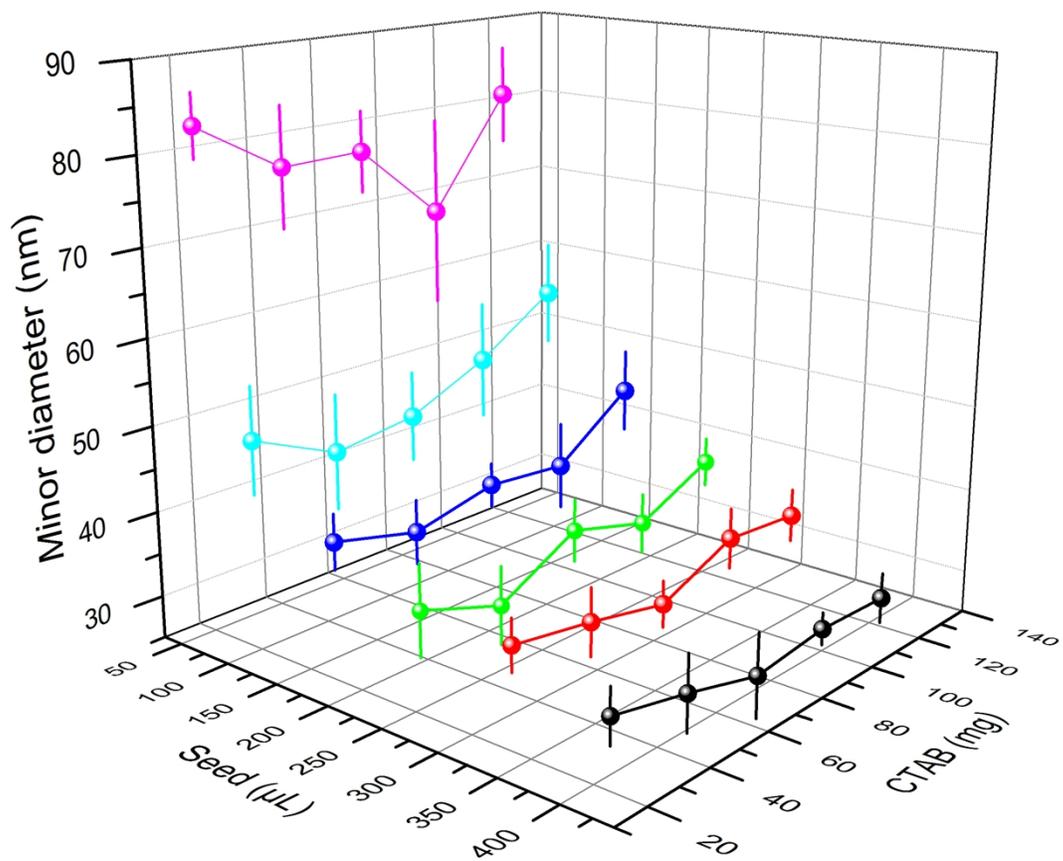
^aDepartment of Chemical Engineering, University of Waterloo, 200 University Avenue
W, Waterloo, Ontario, Canada N2L 3G1

^bWaterloo Institute for Nanotechnology, University of Waterloo, 200 University Avenue
W, Waterloo, Ontario, Canada N2L 3G1

^cCenter for Contact Lens Research, University of Waterloo, 200 University Avenue W,
Waterloo, Ontario, Canada N2L 3G1

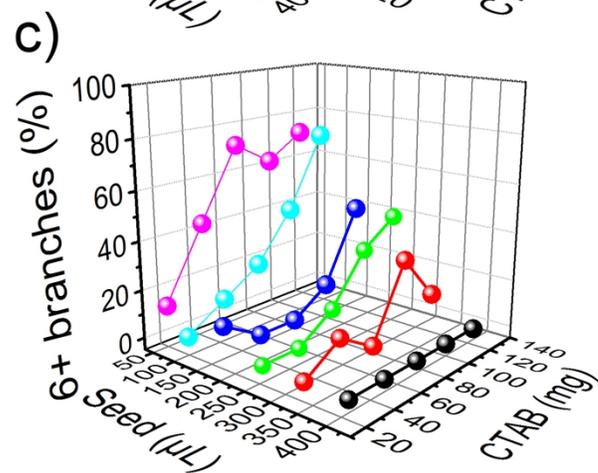
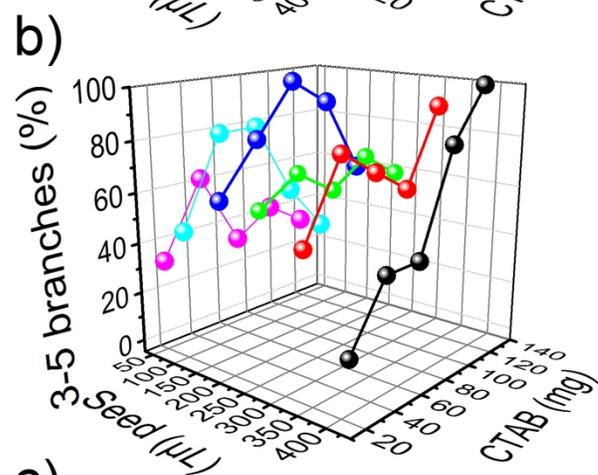
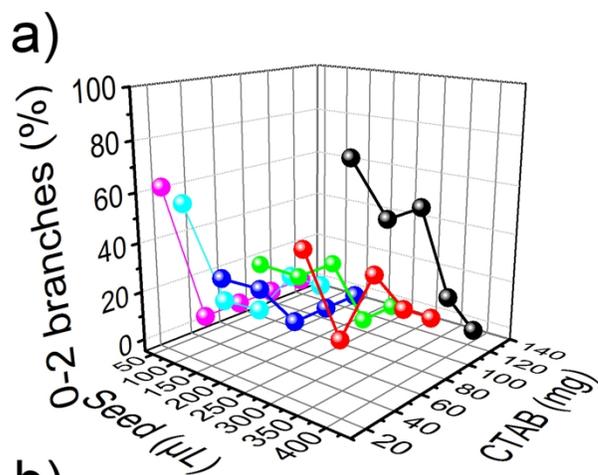
⁺Authors contributed equally

^{*}Corresponding author

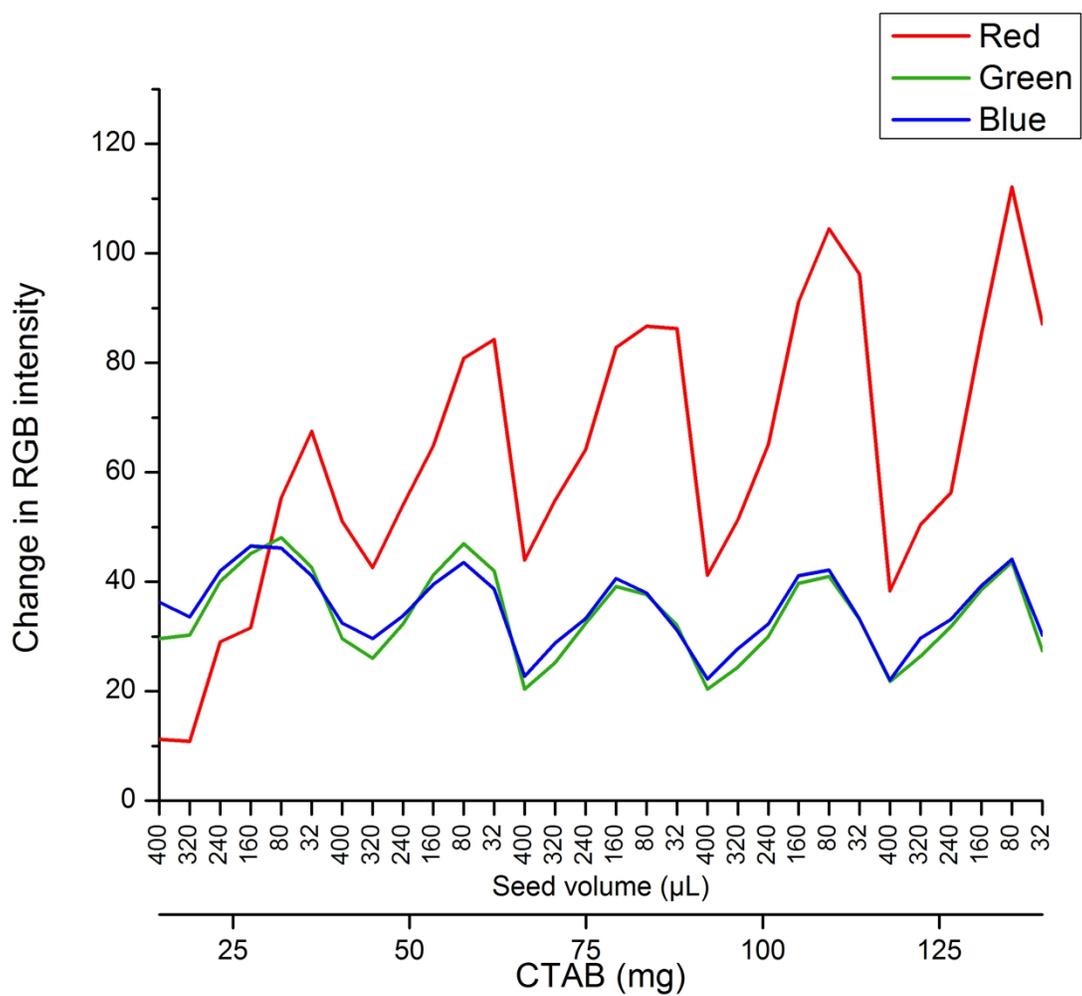


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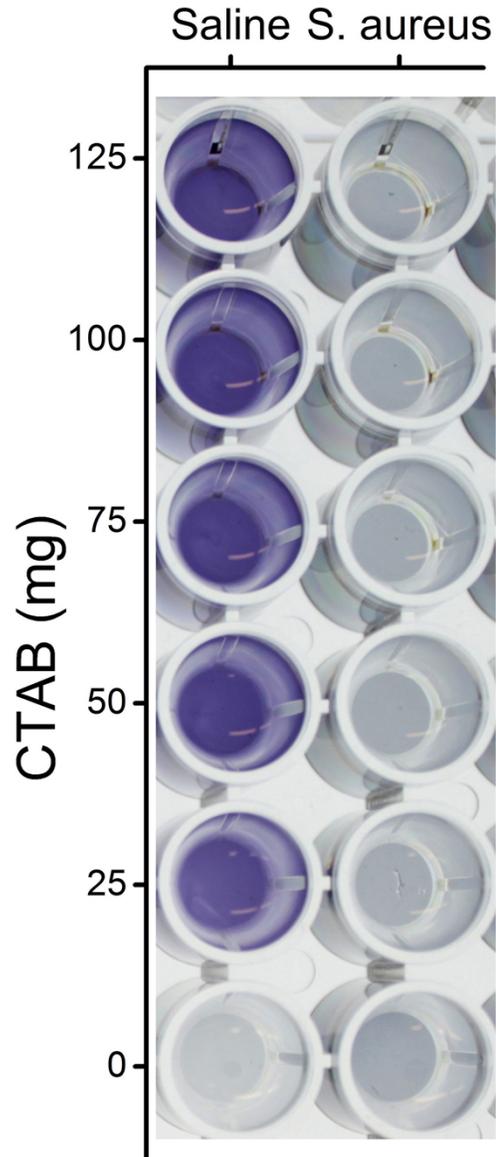
supplementary Figure 1. Minor diameter (n = 10; mean ± S.E.) as defined by Scheme 1.



Supplementary Figure 2. The distribution of branches for the entire 30 nanostar set was characterized using TEM images, and is recorded above, corresponding to bins of a) 0-2 branches, b) 3-5 branches and c) 6+ branches.



Supplementary Figure 3. Maximum change in RGB values for color change in the presence of *S. aureus* is plotted against gold nanostar sample. The red component (solid red line) was found to have the greatest representation of color change for the nanostars. The blue (solid blue line) and green (solid green line) components were found to correspond to the red components, as expected due to overall color change in the wells.



Supplementary Figure 4. The effect of CTAB concentration on the ability to detect bacteria. Saline (with ~0.006% broth) was used as control and *S. aureus* was prepared at a normalized absorption of 0.1 at 660 nm.