

Controlling the nucleation and growth of salt from bodily fluid for enhanced biosensing application

Siddharth Srivastava ¹, Yusuke Terai ^{1,2}, Jun Liu ¹, Giovanni Capellini ^{3,4} and Ya-Hong Xie ^{1,5,*}

¹ Department of Materials Science and Engineering, University of California, Los Angeles, CA 90095, USA; sidsri@ucla.edu (S.S.); yterai1105@gmail.com (Y.T.)

² Department of Micro-Nano Mechanical Science and Engineering, Nagoya University, Nagoya 464-8601, Japan

³ IHP—Leibniz Institute for High Performance Microelectronics, 15236 Frankfurt (Oder), Germany; giovanni.capellini@uniroma3.it

⁴ Department of Science, Università Degli Studi Roma Tre, Viale Marconi, 446 Rome, Italy

⁵ Jonsson Comprehensive Cancer Center, University of California, Los Angeles, CA 90095, USA

* Correspondence: yhx@ucla.edu

SUPPLEMENTARY DATA

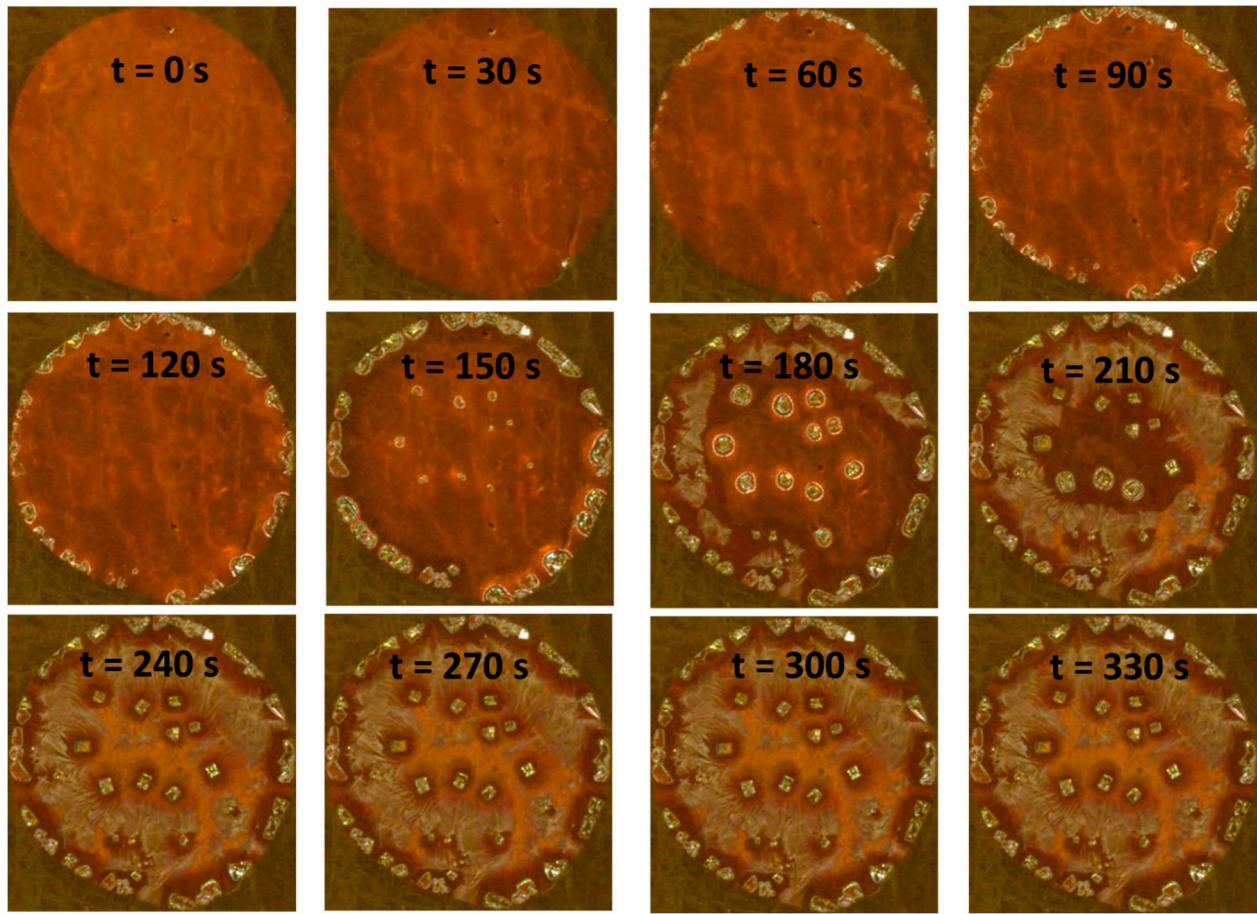


Figure S1. Progression of crystallization

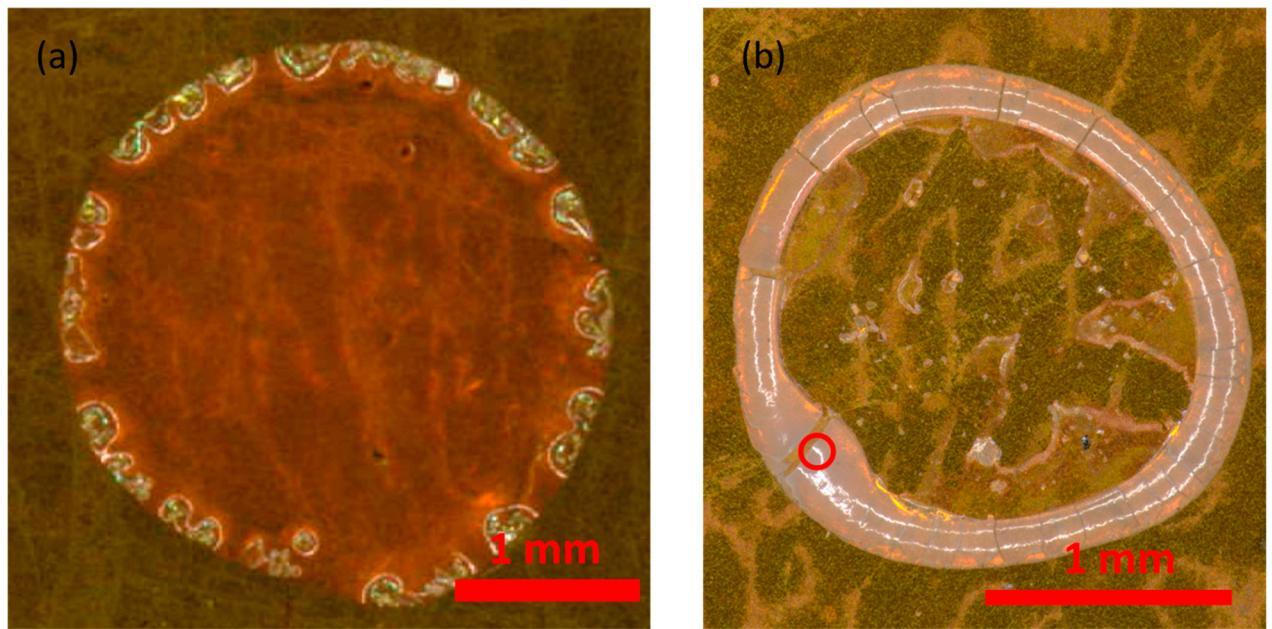


Figure S2. Coffee-ring formation for (a) PBS solution, (b) PS in DI water

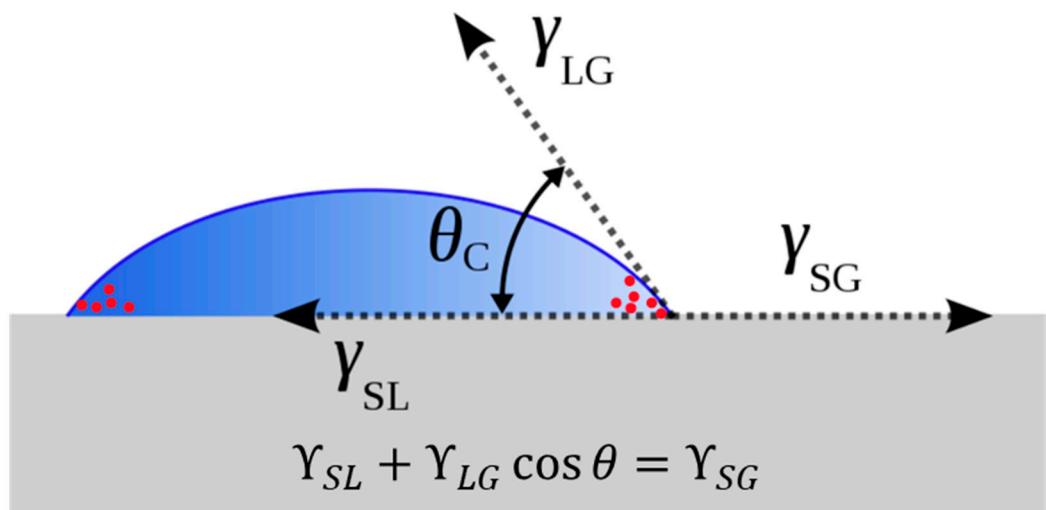


Figure S3. Force balance for surface tension components at the contact line at droplet-substrate interface

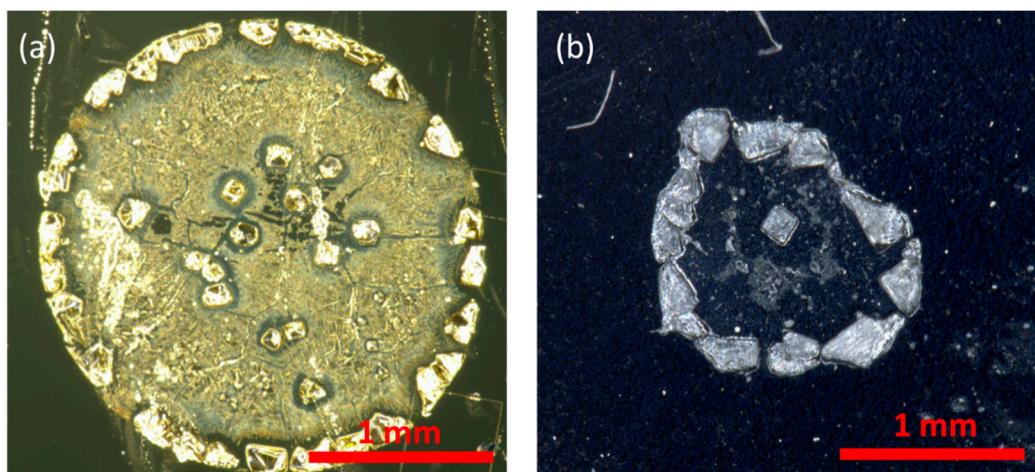


Figure S4. No laser-induced precipitation observed on (a) Unpatterned Au substrate, (b) Silicon substrate

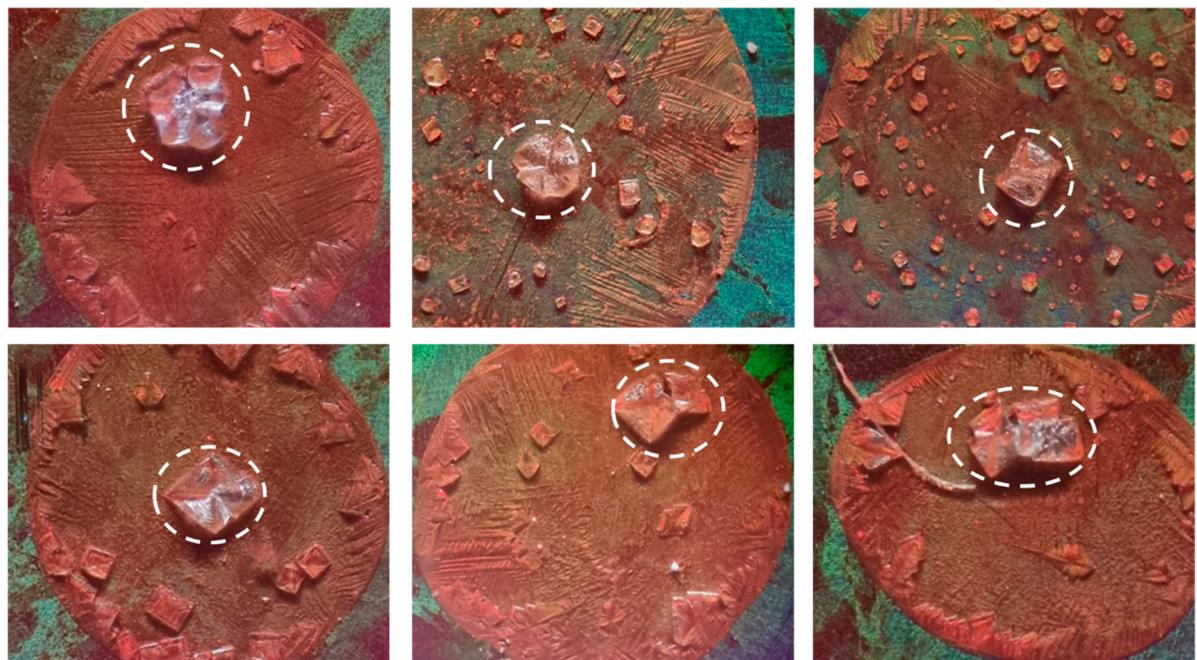


Figure S5. Repeated observation of plasmonic precipitation

Table S1. PBS Composition

Reagent	Amount, g	Concentration, mM
NaCl	8	137
KCl	0.2	2.7
Na ₂ HPO ₄	1.44	10
KH ₂ HPO ₄	0.24	1.8