

Supplementary Materials: Air trapping mechanism in artificial Salvinia-like micro-hairs fabricated via direct laser lithography

Omar Tricinci, Tercio Terencio, Nicola M. Pugno, Francesco Greco, Barbara Mazzolai and Virgilio Mattoli

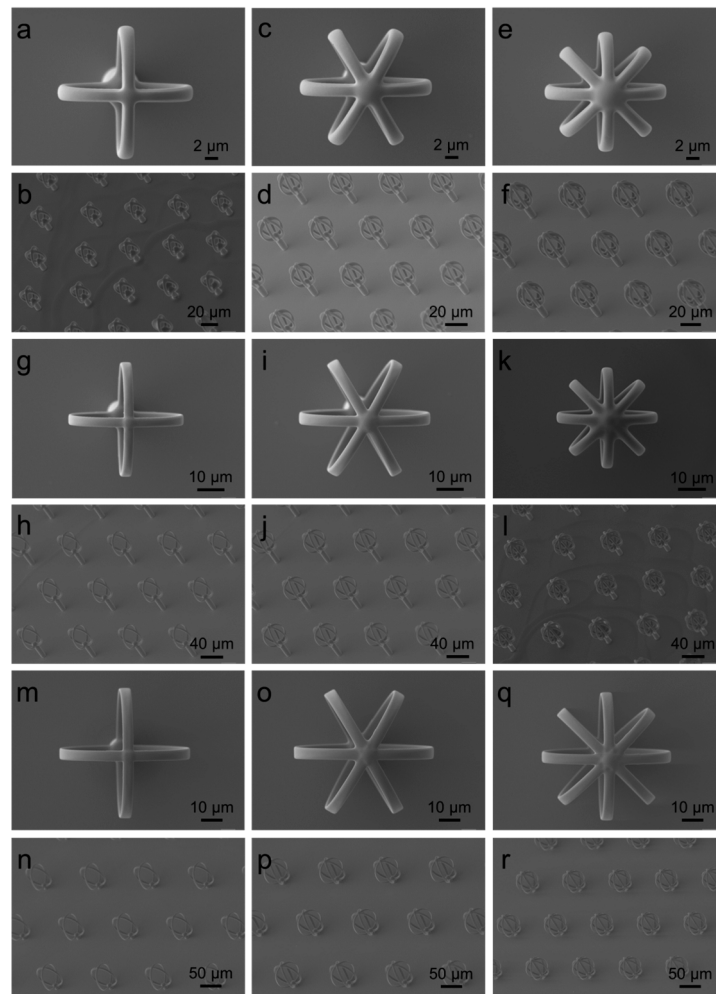


Figure S1. SEM images of design 1 (a,b); 2 (c,d); 3(e,f); 7 (g,h); 8 (i,j); 9 (k,l); 13 (m,n); 14 (o,p); 15 (q,r). Designs refers to table in Figure 1d.

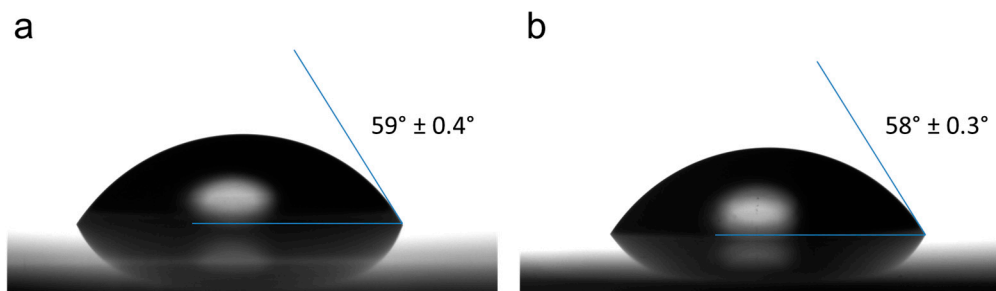


Figure S2. (a) Static contact angle of water on flat SU-8; (b) Static contact angle of water with 5(6)-TRITC ($0.01 \text{ mg}\cdot\text{mL}^{-1}$) on flat SU-8.

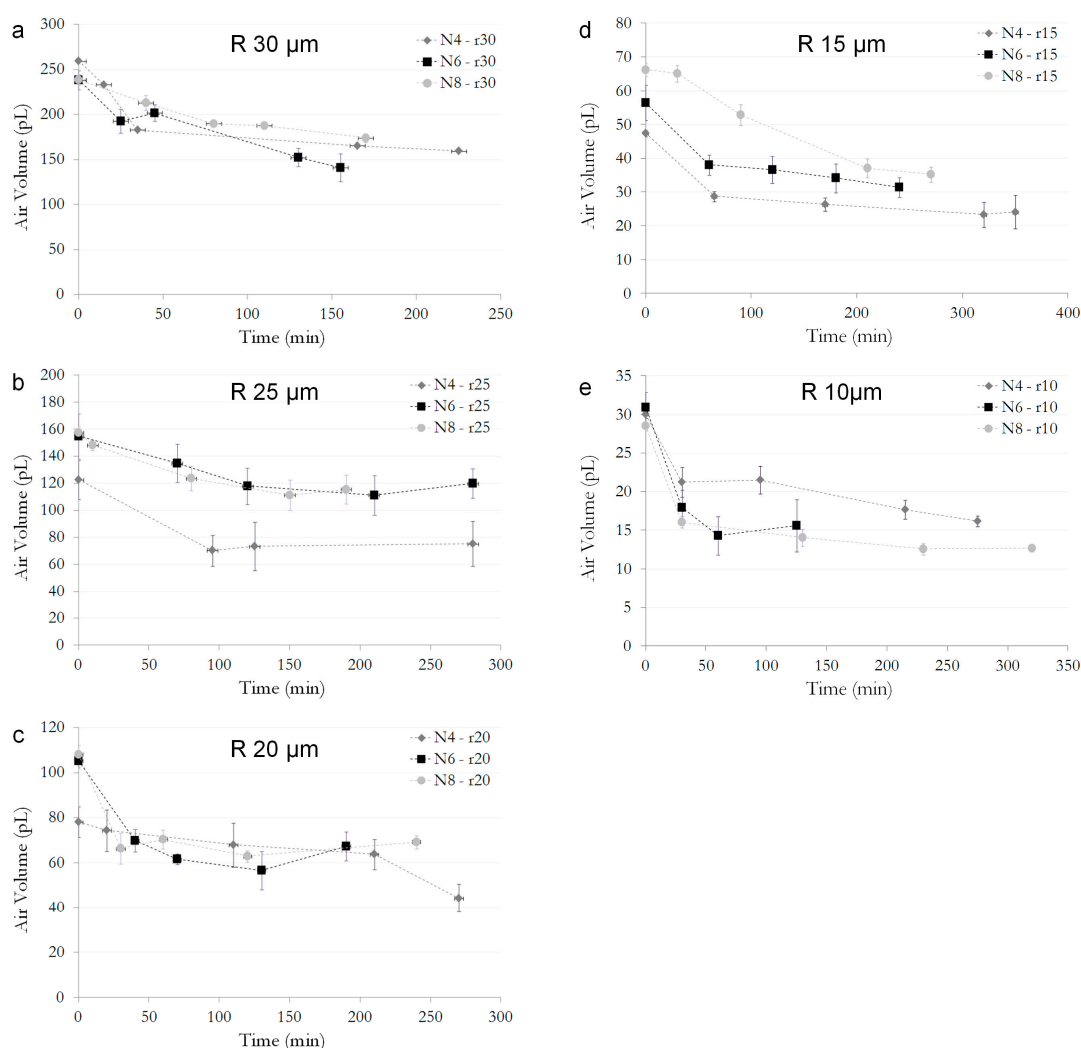


Figure S3. (a–e) Results of the dynamics of the variation of the air volumes trapped in the salvinia-like structures for all the tested designs (see Figure 1d), grouped for crown-like radius heads. N represents the number of filaments composing the crown-like heads while R is the radius of the heads.

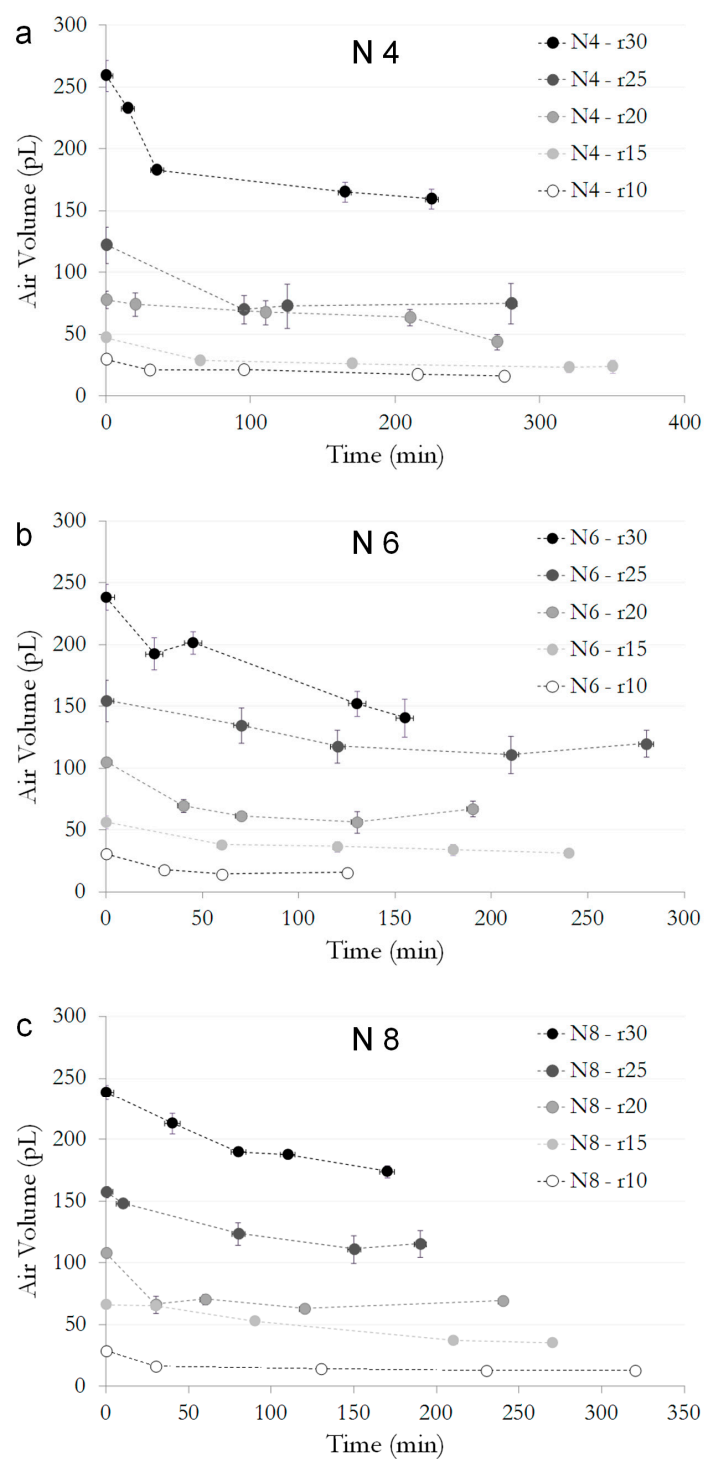


Figure S4. (a–c) Results of the dynamics of the variation of the air volumes trapped in the salvinia-like structures for all the tested designs (see Figure 1d), grouped for number of crown-like heads filaments. N represents the number of filaments composing the crown-like heads while R is the radius of the heads.