

Abstract Submitted  
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**Particulate Tracer Sensors for X-ray Flow Imaging** SUNGSOOK  
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POSTECH TEAM — Monitoring opaque biological fluid flows is essential to un-  
derstand the biophysics of biofluids explaining dynamic life phenomenon and basic  
metabolic mechanisms. Quantitative information on fluid flows also enables to de-  
tect and treat the circulatory diseases related with abnormal blood/body fluid flows.  
In this study, to enhance the imaging efficiency in biological system, various biocom-  
patible micro-/nano-scale tracer particles are developed as X-ray contrast-enhancing  
flow sensors. The size and shape of the designed flow sensors are optimized in terms  
of the delivery efficiency and the contrast enhancement in synchrotron X-ray imag-  
ing. The controlled physical properties are observed to significantly influence on the  
flow tracing ability and the contrast enhancement depending on the systems to be  
studied.

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