Angle-scanning surface plasmon resonance system with 3D printed components for bio-recognition investigation

ChenGuang Zhang[1], Ching-Jung Chen[1]*, Kalpana Settu[2], Jen-Tsai Liu[3]*

[1] School of Electronic, Electrical and Communication Engineering, University of Chinese Academy of Sciences, P.R. China

[2] Department of Electrical Engineering, National Taipei University, Sanxia, Taiwan

[3] College of Materials Science and Opto-Electronic Technology, University of Chinese Academy of Sciences, P.R. China

Supplementary Materials

3D printed components

The printed components were mainly used to replace metal manufactured parts, including the optical base, holders, fitting parts and etc. 3D printing enables the rapid assembly of scattered devices such as laser, photodiode, prism, Au-coated glass slide and so on into a complete system. Detailed information can be seen in fig. S1.

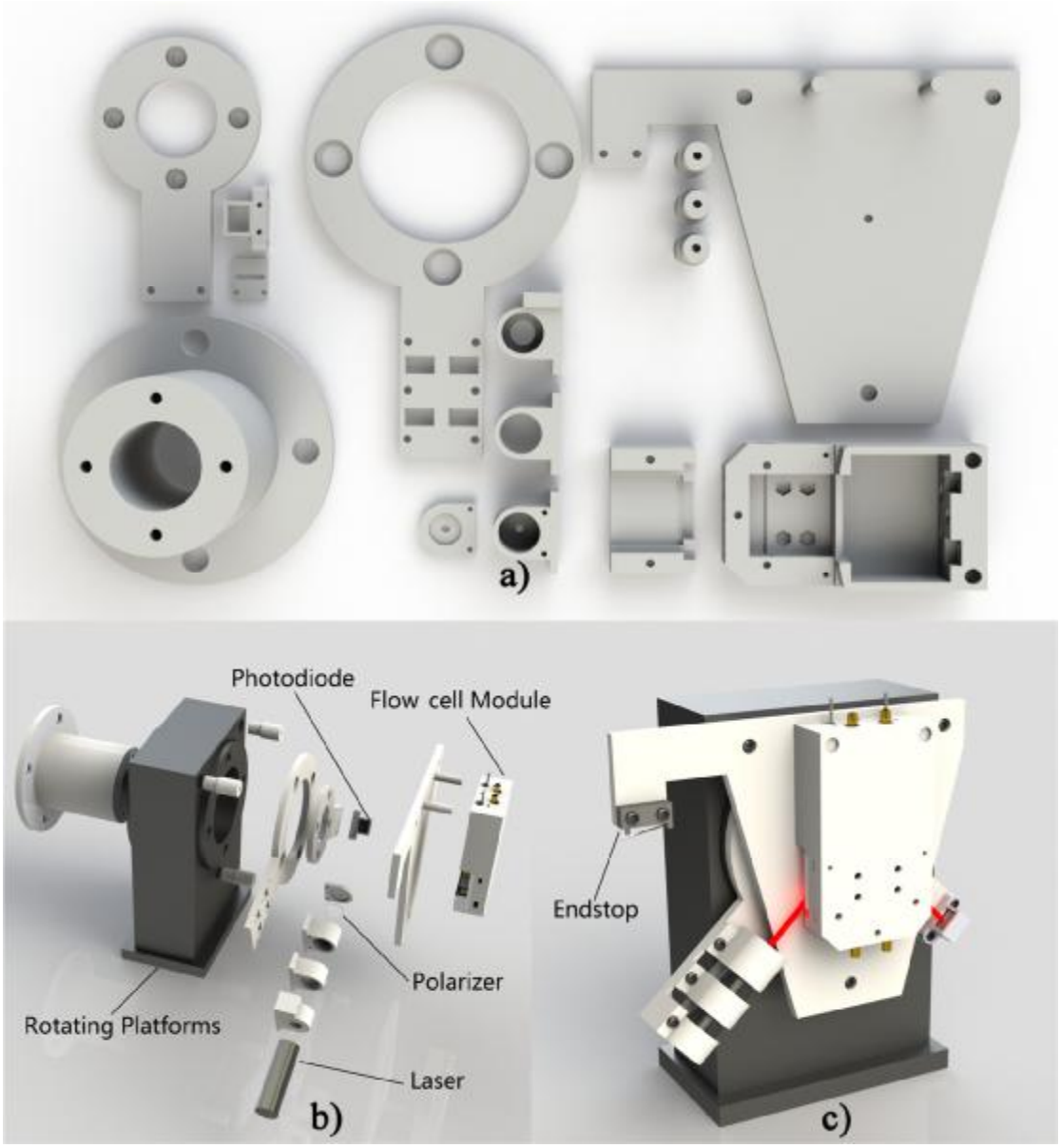

Figure S1 Detailed information for SPR system: a) 3D printed components for the developed system. b) Exploded views for sytem design. c) Assembly result.

Flow-cell design

As described in the manuscript, flow cell module consists of rubber flow cell and stainless parts. And the detailed design information was depicted in fig. S2.

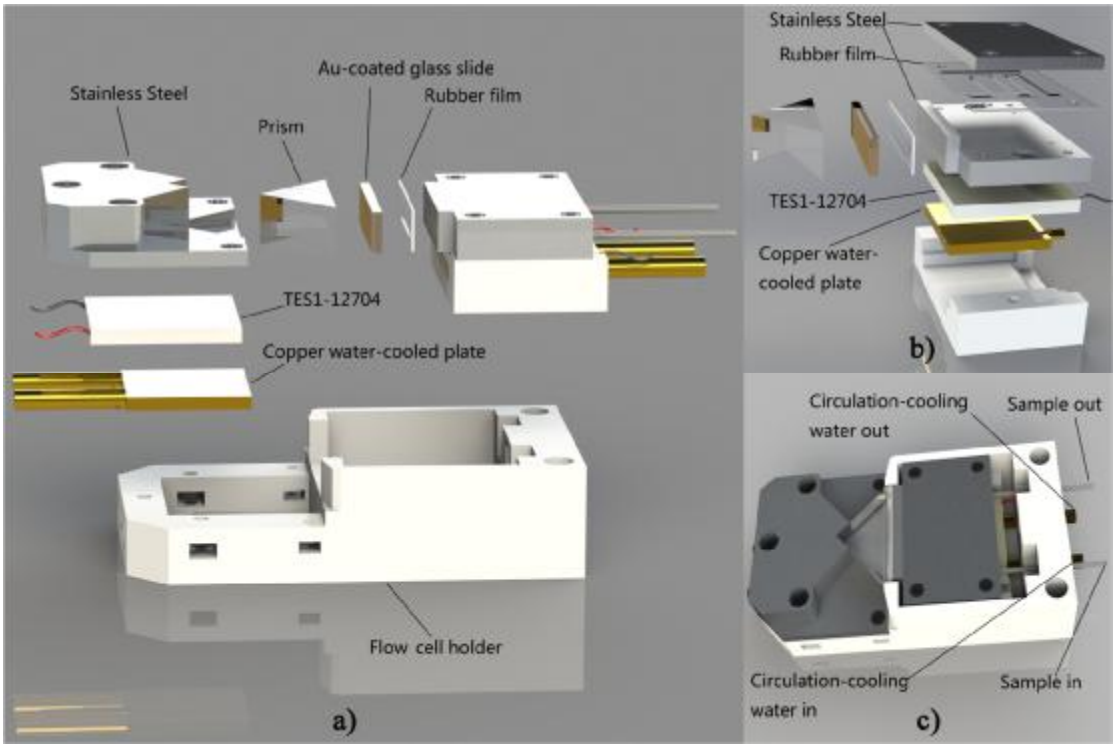

Figure 2 Flow cell module design. a) Exploded view for flow cell module. b) Exploded view for core part of flow cell module. c) Assembly result.