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## Surface modification of a microfluidic channel by a multiple metal layer coating method

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A multiple metal layer coated microfluidic channel has been prepared by a metal evaporating method for a miniaturized biosensor chip. Microfluidic sensor chips such as biochips, lab-on-a-chips and diagnostic chips are rapidly developed for medical, biochemical, and nano bio-technological applications. An electrode metal material such as Pt or Au was generally coated on a part of a microfluidic channel of a biosensor. However, a thin metal layer could be used as a reflective surface of an incident light in a microfluidic sensor chip that has a spectroscopic detector to analyze a biochemical material in a sample solution. Thus, a metal layer, Pt or Al/Pt, was coated on the whole surface of a microfluidic channel including bottom and top surfaces by metal evaporating procedures. Especially, Al was coated on the surface of a microfluidic chip to reflect UV light including visible light. Then, Pt was coated on the Al layer of the microfluidic chip to provide a chemically inert surface. The prepared metal coated microfluidic channels were characterized by optical and electrical microscopic methods and a spectroscopic method.

### Biography

Young Ho Kim completed his PhD in Biochemistry at Kyungpook National University. In his PhD works, microchip based bio-analytical instruments and systems including an electro-osmotic flow nano-pipette and a capillary electrophoresis chip device were developed for miniaturized nano bio-systems. He worked at Harvard-MIT and Auburn University as a Post-doc Researcher. His research interest includes "Nano-bio micro devices, and miniaturized devices". Currently, he is working at Daegu-Gyeongbuk Medical Innovation Foundation. He has published over 30 peer-reviewed papers and 35 patents.

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