

## Prof. Tsuyoshi Minami

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### Biography

Tsuyoshi Minami received his PhD (Eng) from Tokyo Metropolitan University (Japan) in 2011. During his PhD studies he worked at University of Bath (UK) on collaborative projects. Between 2011 and 2013 he was a Postdoctoral Research Associate at Bowling Green State University (US). In 2013 he was appointed as a Research Assistant Professor at the same University. Then he moved to Yamagata University (Japan) as an Assistant Professor in 2014. He was appointed as a Lecturer at The University of Tokyo in 2016, and then he has been an Associate Professor since 2019 at the same University.



### Abstract - Organic transistor-based chemical Sensors

Organic field-effect transistors (OFETs) are some of the more fascinating electronic devices because of their attractive properties such as durability, environmental friendliness and solution processability. To date, OFETs have been employed for the development of flexible displays, radio-frequency identification tags, flexible non-volatile memories, etc. Moreover, owing to the above advantages, OFETs could be applied to disposable on-site bioanalytical devices. In this regard, we have developed OFETs functionalized with molecular recognition materials for sensing of proteins and small ionic species. For example, the fabricated OFETs successfully detected glycoproteins, biogenic amines, monosaccharides without any complicated labeling processes. Because our proposed electrical bioassay on the basis of the OFETs is rapid and easy-to-use, OFETs will be an attractive platform for on-site monitoring devices in healthcare applications in the near future.