Plenary/Keynote/Invited Lecture/Poster*/Oral**
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Monochromophore-Based Dual-channel Near-infrared Fluorescent Probes

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Abstract:
Molecularly near-infrared (NIR) theranostics, combining in vivo sensing and tumor-specific therapeutic capability within one molecular system, have received considerable attention in recent years. Compared with the visible fluorescence imaging, near-infrared (NIR) imaging (emission wavelength at 650-900 nm) have advantageous as imaging agents owing to the minimum photodamage to biological samples, deep penetration, and low interference from auto-fluorescence. In over past decades, there has been an explosive development in the design of molecular imaging contrasts and imaging-guided therapeutics. In this mini-review, we have sumarried the strategies of the NIR theranostics for imaging and tumor-specific chemotherapy applications in living systems. It is noted that the molecularly NIR theranostic design strategy could address current challenges of real-time *in vivo* sense-and-release for the intelligent biosensing and personalized treatment.

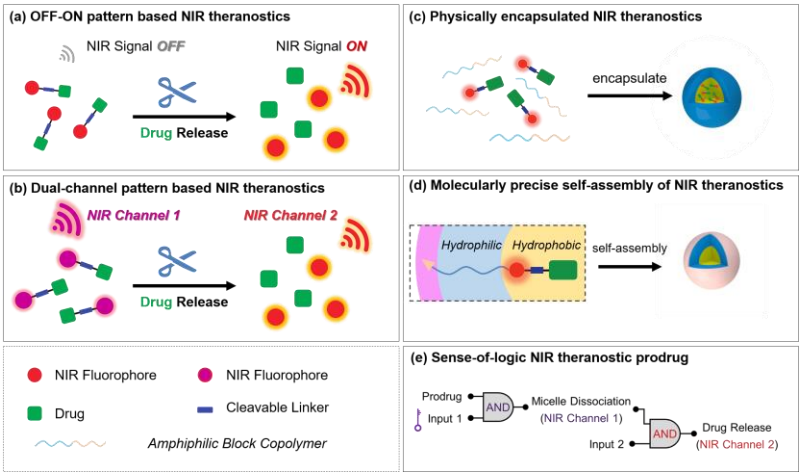

Fig 1. Strategies of molecularly NIR theranostics for real-time tracking chemotherapy

References and Notes:

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Zhiqian Guo received his PhD degree in 2010 from East China University of Science & Technology (ECUST) under the supervision of Prof. Wei-Hong Zhu. From 2011 to 2012, he worked with Prof. Dr. Juyoung Yoon (Ewha Womans University/Korea) on organic chemistry. He became a full professor at ECUST in 2017. His current research interests include focused on functional chromophores, including fluorescent sensors, drug delivery system and molecular logic device.