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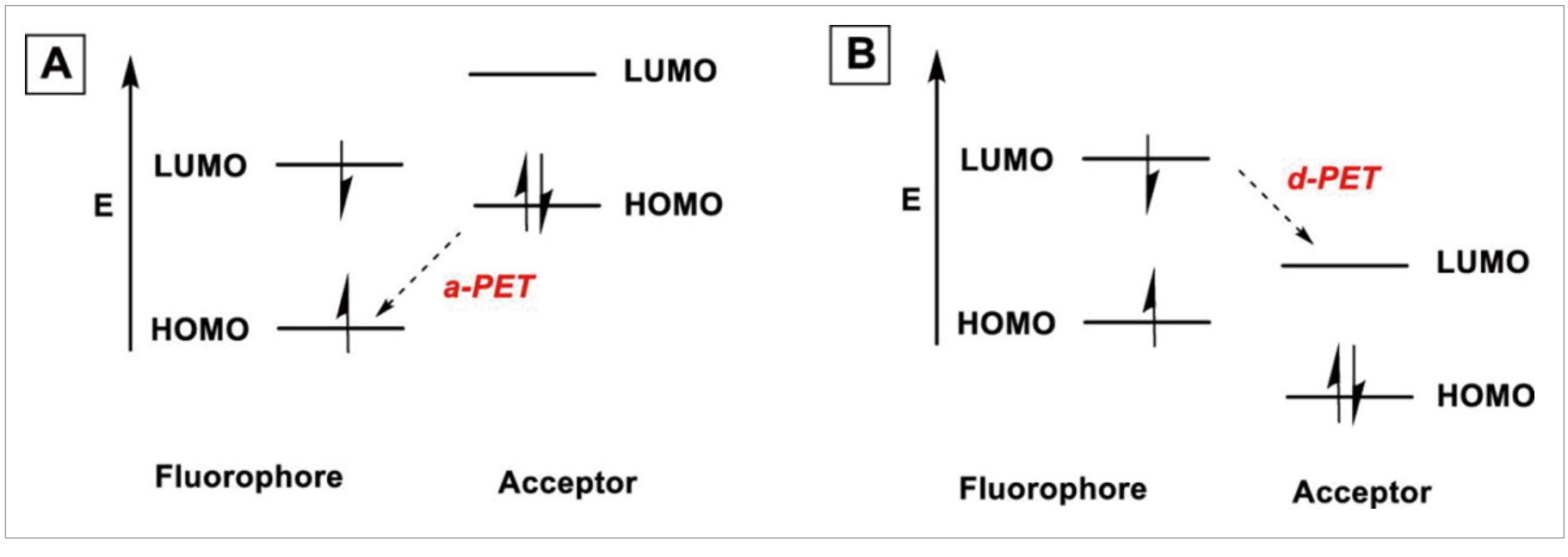
Academician Peng Xiaojun's Team Published a Review of PET Fluorescent Probes in *Accounts of Chemical Research*

Source: School of Chemical Engineering

Academician Peng Xiaojun and Professor Fan Jiangli of State Key Laboratory of Fine Chemicals, published a review entitled "Activity-Based Sensing and Theranostic Probes Based on Photoinduced Electron Transfer" in Accounts of Chemical Research, a prestigious international journal.



(http://dx.doi.org/10.1021/accounts.9b00340)

Fluorescent probes have become powerful tools in detection, imaging and disease diagnosis due to their high sensitivity, specificity, fast response, and technical simplicity. In the last decades, researchers have made remarkable progress in developing signaling mechanisms to design fluorescent probes such as photoinduced electron transfer (PET), intramolecular charge transfer (ICT), and fluorescence resonance energy transfer (FRET). Typical PET is composed of a multicomponent system in which a fluorophore (electron acceptor) is separately linked with a recognition group (electron donor) via a short spacer. PET probes normally feature a low fluorescence background and significant fluorescence enhancement in response to targets. Recent research revealed that PET probes have also been used as theranostic agents, whose fluorescence and toxicity can be simultaneously activated by cancer-specific parameters.

In this account, Peng's team highlight the recent advances of rational design and applications of PET probes, focusing primarily on studies from our research group. For example, different from the case of the traditional single-atom electron donor (O, S, N, Se, Te, etc.) in typical PET, they used a electron-rich pyrrole ring to "switch off" the fluorescence of the fluorophore more efficiently through an "enhanced PET" effect which provided a lower background fluorescence and higher signal-to-noise ratio. Furthermore, normal PET represents the main principle behind the design of small molecule "off–on" fluorescent sensors. They developed new PET platform through intramolecular space folding (folding PET) to overcome the difficulty of designing PET enzyme-targeting probes. Therefore, based on typical PET and these new PET concepts, they, for instance, reported PET probes for the detection of Zn2+ without proton interference, a BODIPY-based d-PET probe for reporting local hydrophilicity within lysosomes, and an "enhanced PET" fluorescent probe for imaging HClO in cancer cells. They also developed COX-2-specific probe for identifying cancer cells and quantifying cancer-related events, and a KIAA1363-sensitive probe for tracking solid tumors in living mice. Furthermore, they first applied an aminopeptidase N (APN)-sensitive probe based on PET for cancer diagnosis and therapy. They anticipate that further development of PET fluorescent probes providing more sensitivity and selectivity to analytes of interest will be equipped with more functions and play indispensable roles in the studies of pathology, diagnostics, and cancer therapies.

The author of this review is Sun Wen, associate researcher, Li Miao, a doctoral student, and the corresponding author is Professor Fan Jiangli and Academician Peng Xiaojun.

Establish Platform for International Exchange and Cooperation and Focus on Innovation in Economics Management Talent Cultivation —the 5th (2019) International Advisory Board (IAB) Annual Meeting of School of Economics and Management was held at DUT

Source: School of Economics and Management

On October 30-31, 2019, the 5th (2019) International Advisory Board (IAB) Annual Meeting of School of Economics and Management of Dalian University of Technology was held. Experts and scholars from more than ten business schools at home and abroad as well as business executives gathered in this event, which provided a new platform for the participants to expand new horizons, and offered advice for common development.

In the meeting, the colleagues from other business schools, such as Michigan State University, Ohio State University and Shanghai International Studies University, gave keynote speeches and discussed on undergraduate education.

International Advisory Board (IAB).

Presidents from well-known domestic and overseas universities, deans of business school at home and abroad, as well as some senior business executives from international top enterprises were invited by School of Economics and Management to serve as the IAB member. They provided suggestions and consultations for the strategic issues such as the operation and internationalization of the school, which offers strong support for the school to be in line with the international business school and the integration of international high-end educational resources.

FPX wins! The big boss behind the scenes is a DUTer!

Source: Alumni Office

On the evening of November 10th, Beijing time, the 2019 League of Legends World Championship kicked off in Paris, France. The two sides were the FPX team (FunPlus Phoenix) under the command of FunPlus Interactive Entertainment Company and G2 team. After a fierce battle, FPX won the championship with a score of 3-0, becoming the fourth team in history to win the S-Match for the first time.

The boss who took the championship is Zhong Yingwu, an alumnus of Dalian University of Technology.

Zhong Yingwu was admitted to DUT and majored in Engineering for Thermal Energy and Power in 2002. After the establishment of the School of Software Technology in 2003, he transferred to the software engineering major and graduated in 2006. In 2007, he obtained a master's degree in computer science from Maharishi University. Funplus was founded in May 2010, which is currently one of the top 6 game developers on Facebook.

Zhong Yingwu is still impressed by a course he took in the first semester of his junior year, Computer Graphics Experiment. The teacher who taught this course returned from studying in France. She and her friends had run a game company overseas. In class, she occasionally mentioned these experiences and the games she had developed, which opened a new door for Zhong Yingwu. "The influence of teachers' vision on students is immeasurable. It will inadvertently stimulate the potential of students. The higher the teachers' vision, the better he/she will inspire the potential students."

Nowadays, at the age of 34, Zhong Yingwu is at the helm of this global game company. Recalling his alma mater's time, he says: "I'm very grateful to the teachers who enlightened my initial interests and patterns".