Chinese Chemical Letters 28 (2017) iii-ix

Contents lists available at ScienceDirect

Chinese Chemical Letters

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Reviews

SNAP-tag fluorogenic probes for wash free protein labeling

Chinese Chemical Letters 28 (2017) 1911

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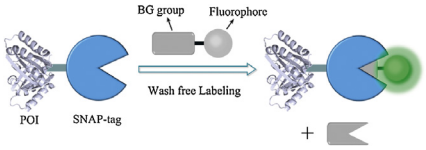
In this review, we described the design strategies of SNAP-tag fluorogenic probes with turn-on fluorescence responses, which minimized the fluorescence background and allowed for direct imaging in living cells without wash-out steps. These probes can apply in real-time analysis of protein localization, dynamics, and protein–protein interactions in living cells. Furthermore, the excellent fluorescent properties made it possible to apply some of the probes in super-resolution fluorescence imaging.



Fluorescent probes for recognition of ATP

Chinese Chemical Letters 28 (2017) 1916

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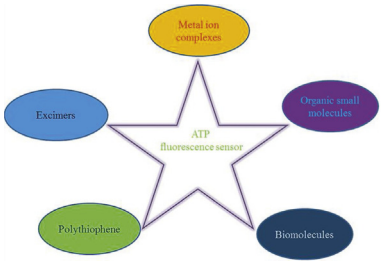
Adenosine 5'-triphosphate (ATP) plays an important role in various physiological activities and pathological processes in living cells. Consequently, a large number of fluorescent sensors for detecting ATP have developed in recent years. In this review, we summarized these fluorescent sensors, where these sensors were divided into five typed ones according to the structure of probes used.



Genetically-encoded voltage indicators

Chinese Chemical Letters 28 (2017) 1925

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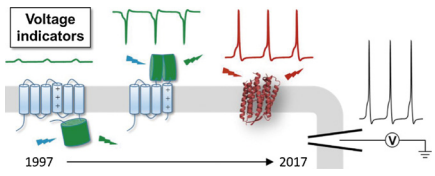
Voltage imaging with genetically-encoded sensors has allowed for the direct visualization of electrical signaling at high spatial resolutions. Over the history of voltage indicator development, various design strategies have been employed to harness the power of the fluctuating transmembrane electric field.



doi:10.1016/S1001-8417(17)30400-X

Communications