

## Rational design of polydiacetylene-antibody complex for biosensors

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Polydiacetylenes (PDA) have been gaining steady interest for their ability to report receptor-ligand interaction colorimetrically. However, versatility of PDA matrices have been limited due to the fact that mechanism of colorimetric response has been relatively unclear. In this experiment, we developed a novel matrix for antibody conjugation using 10, 12 pentacosadiynoic acid (PCDA) and its maleimido derivative, PCDA-MI. From the experiment, we were able to demonstrate that physical and chemical properties dictate the colorimetric properties of the liposome, and hence the sensitivity of the resulting biosensor.