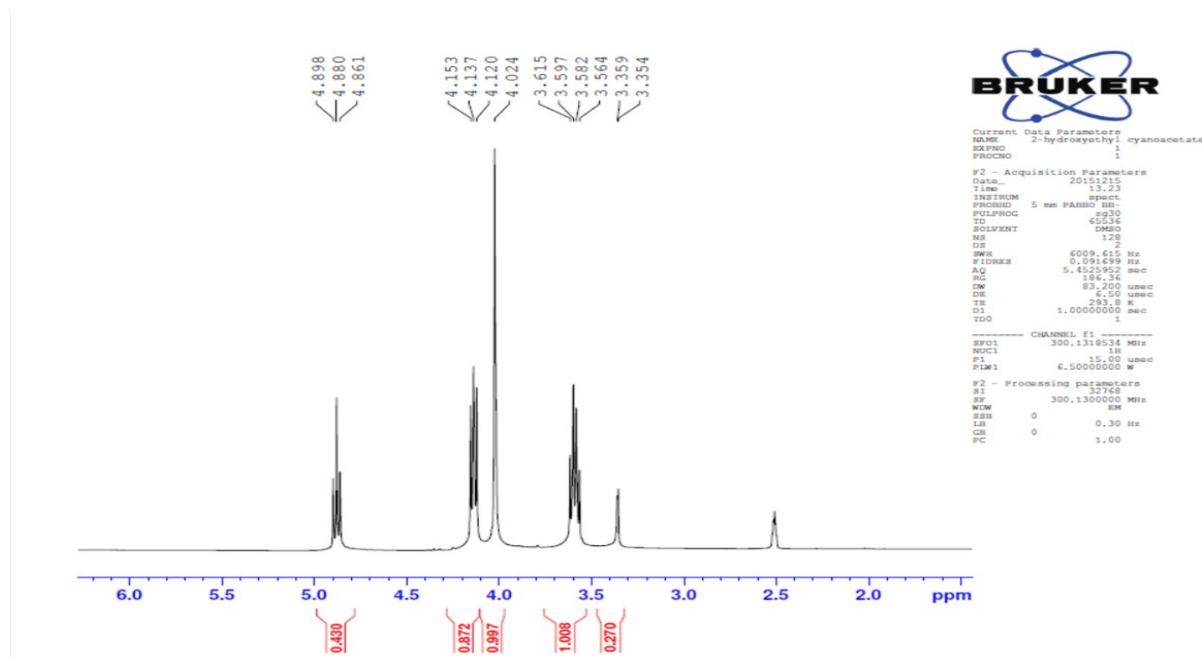


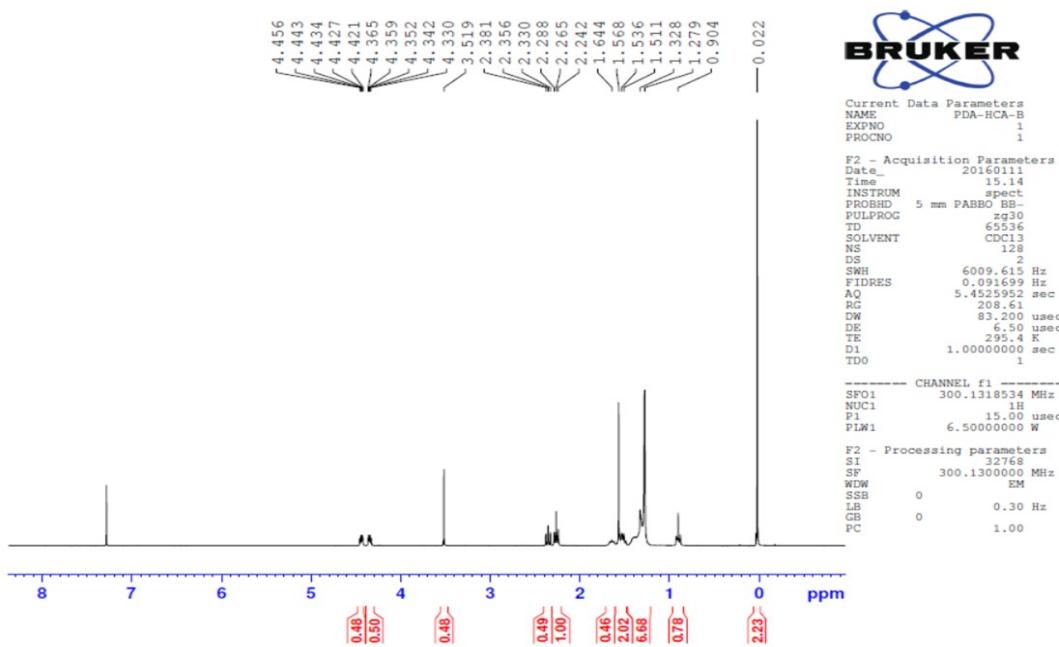
## Supplementary Information

### Polydiacetylene-based Colorimetric Chemosensor for Malondialdehyde Detection; Food Spoilage Indicator

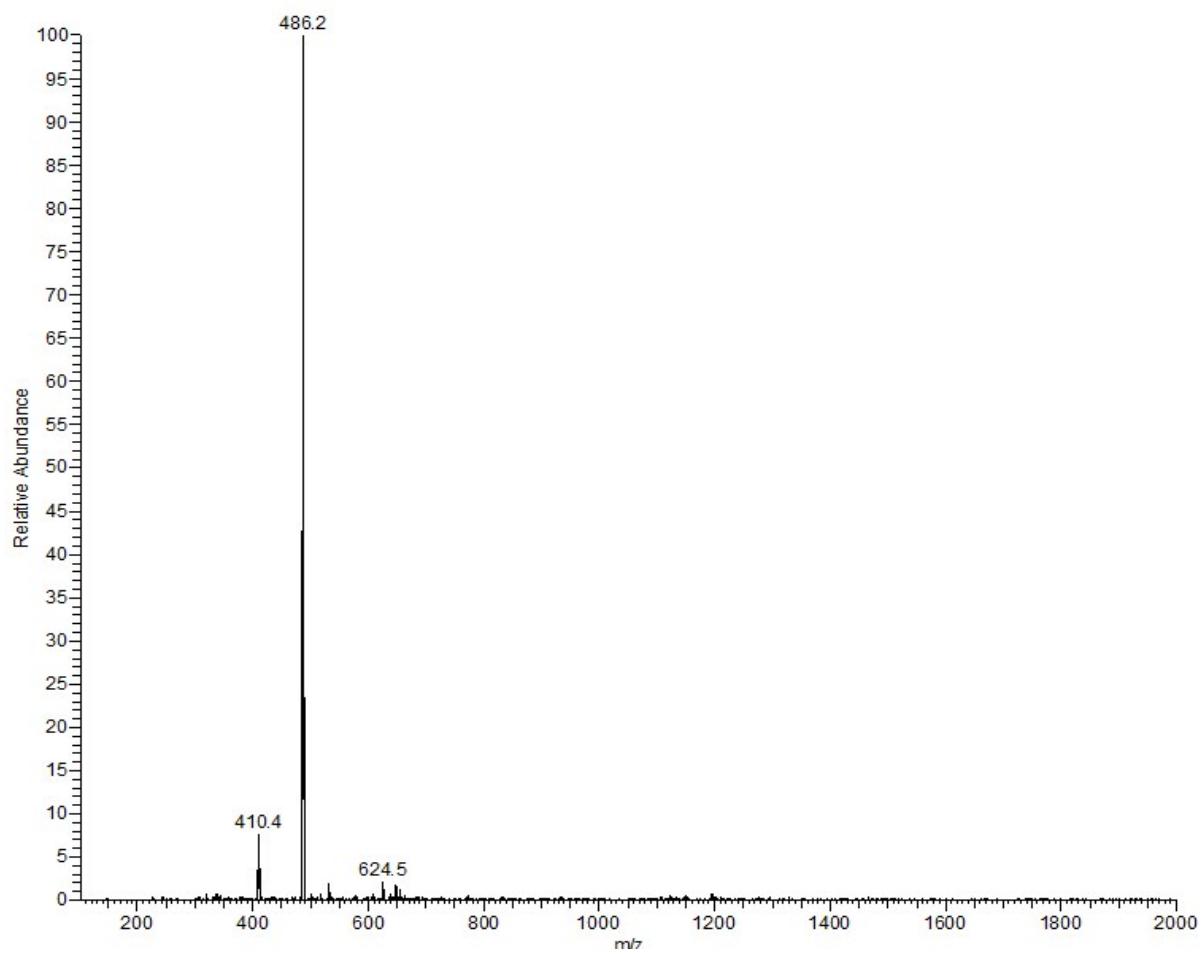
Sangwan Kim, Sunjong Lee, Yejin Ahn, Hyun Ki Kim, Joonseok Koh, Sung Dong Kim and Bong-Gi Kim\*



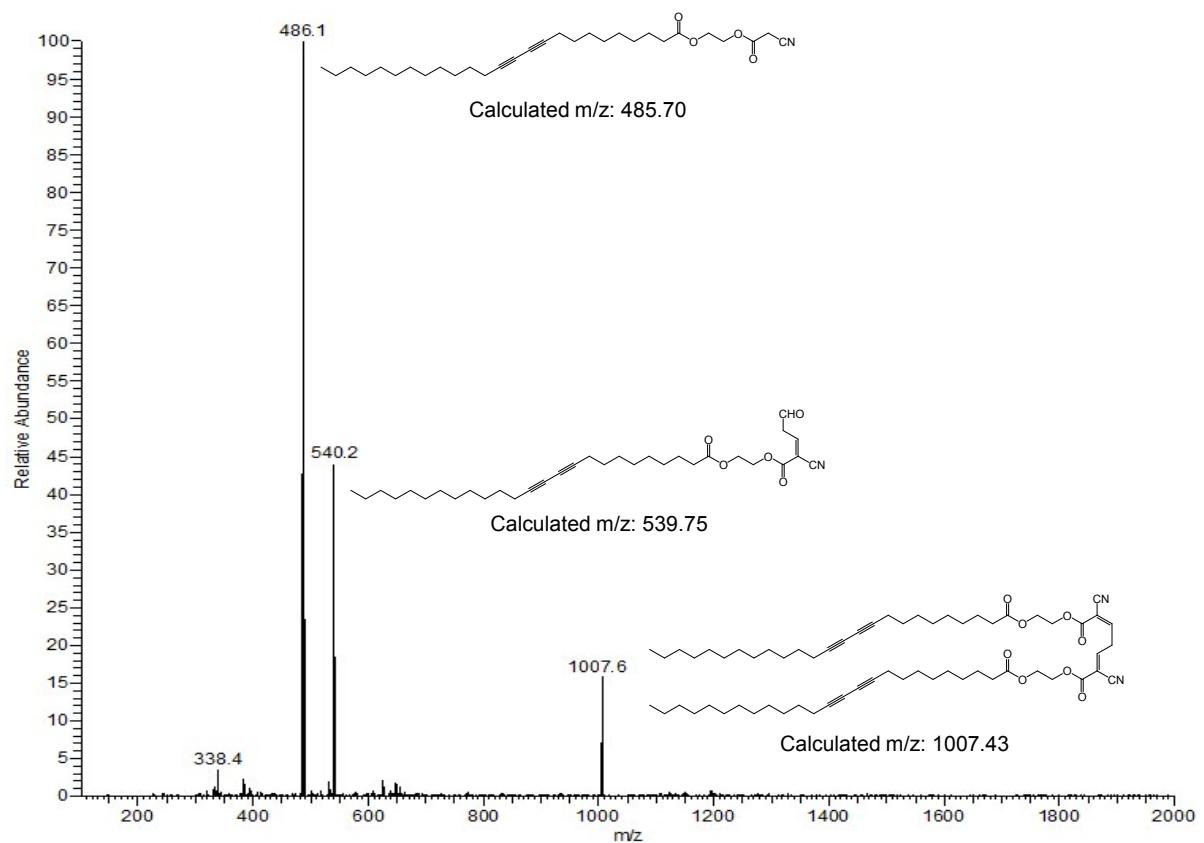
**Figure S1.** <sup>1</sup>H-NMR spectrum of synthesized 2-hydroxyethyl cyanoacetate (HCA, 1).



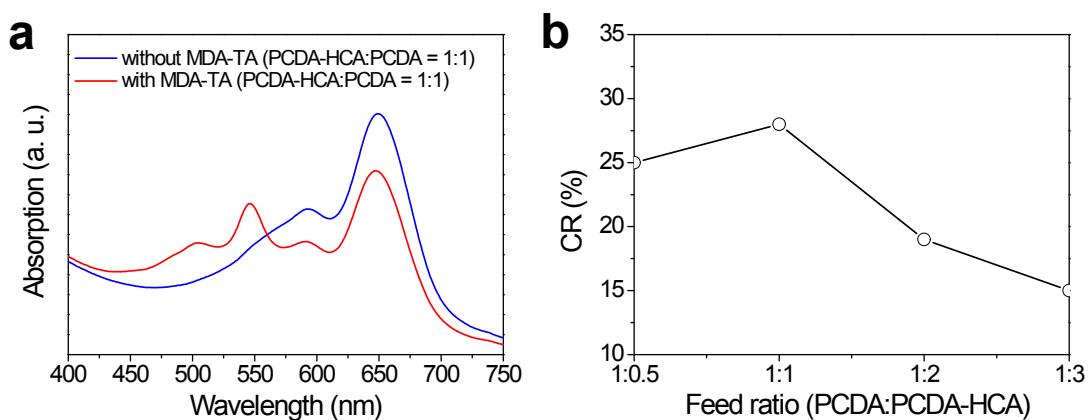
**Figure S2.** <sup>1</sup>H-NMR spectrum of synthesized 2-(2-cyanoacetoxy)ethylpentacosa-10,12-dynoate (**PCDA-HCA**).



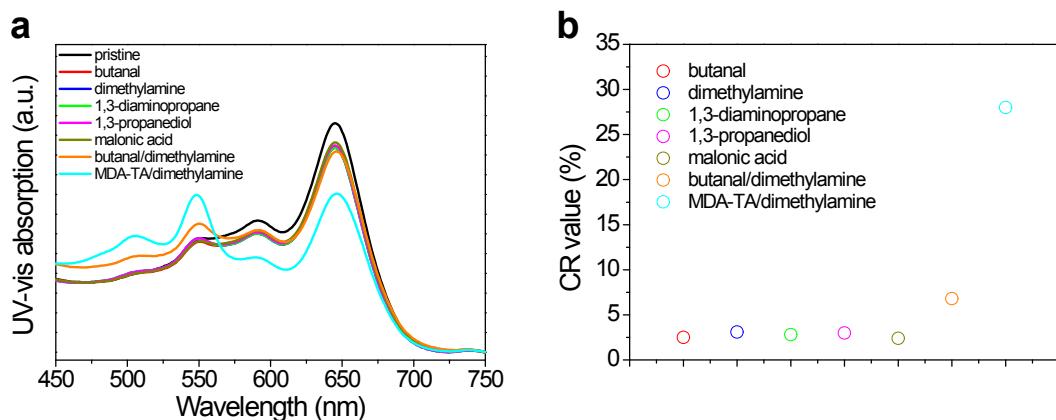
**Figure S3.** LC-mass spectrum of PCDA-HCA



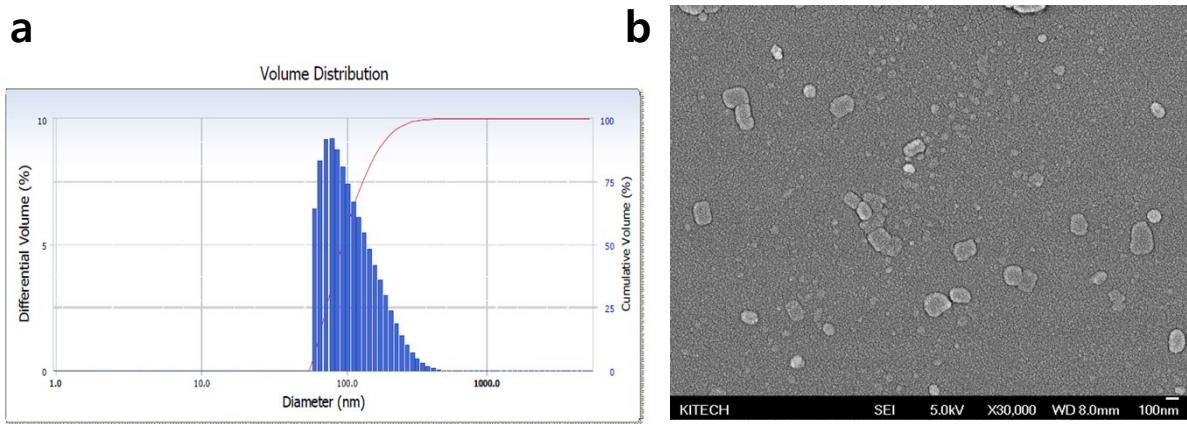
**Figure S4.** LC-mass spectrum of mixture obtained from the reactivity test of PCDA-HCA with MDA-TA/diethylamine



**Figure S5.** (a) UV-vis absorption change of liposome in MDA solution and (b) corresponding CR values depending on monomer feed ratio for liposome preparation.



**Figure S6.** Selectivity of devised chemosensor. (a) UV-vis absorption spectra and (b) corresponding CR values.



**Figure S7.** (a) SEM image of prepared liposomes and (b) their size distribution.