

In this paper, the authors investigated the relationship between the physicochemical properties of nanozymes and nanozyme-strip performance. Nanozyme-strip is a promising technique for rapid and sensitive detection. Besides the catalytic activity, the authors investigated the nanozymes with different sizes, surfaces, and charge in nanozyme-strip using in situ characterization. Based on these characterizations, the authors screened out a CoFe_2O_4 nanozyme suitable for nanozyme-strip and used it to detect $\text{A}\beta$ oligomer with high sensitivity. The work is important for developing reliable nanozyme-strip. Thus the manuscript merits the consideration of acceptance for publication on Sensors.

1. In this paper, several parameters of nanozymes are investigated, which is the most important for nanozyme-strip? More discussion is needed.
2. Both CoFe_2O_4 nanozyme and Fe_3O_4 nanozyme have superparamagnetic properties. Would such magnetic property help improve nanozyme-strip performance? The authors can give some discussion and prospects.
3. The detection limit for $\text{A}\beta$ oligomer is about 0.18 ng/ml. Can such sensitivity match the clinical test? What is the level of $\text{A}\beta$ oligomer in the patient?