

**DRUG DELIVERY SYSTEMS USING Zr-BASED METAL ORGANIC
FRAMEWORK MATERIALS**

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Abstract

Tests of drug loading and release in different buffered solutions were performed. Captopril and ibuprofen were chosen as model drugs. Zr-based metal–organic frameworks were used as drug carriers envisaged for controlled drug release. The carriers demonstrated enhanced drug-loading capacity and showed relatively good results in drug delivery. The cumulative percentage of drug release in phosphate-buffered solution at pH 7.4 was higher than that in buffered solution at pH 1.2. The release rate could be controlled by changing the pH of the releasing solution. Different captopril release behaviors were observed when the experiments were performed using a permeable dialysis membrane. By applying different kinetic models resulted that the mechanism of drug release in various pH media, obeyed Fickian diffusion.

References

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