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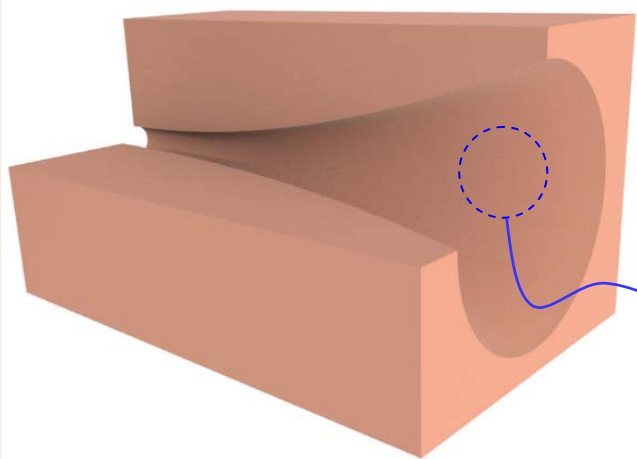


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(a) **Asymmetric nanopore**



(b) **Functionalization with phototriggered amphoteric Lysine**

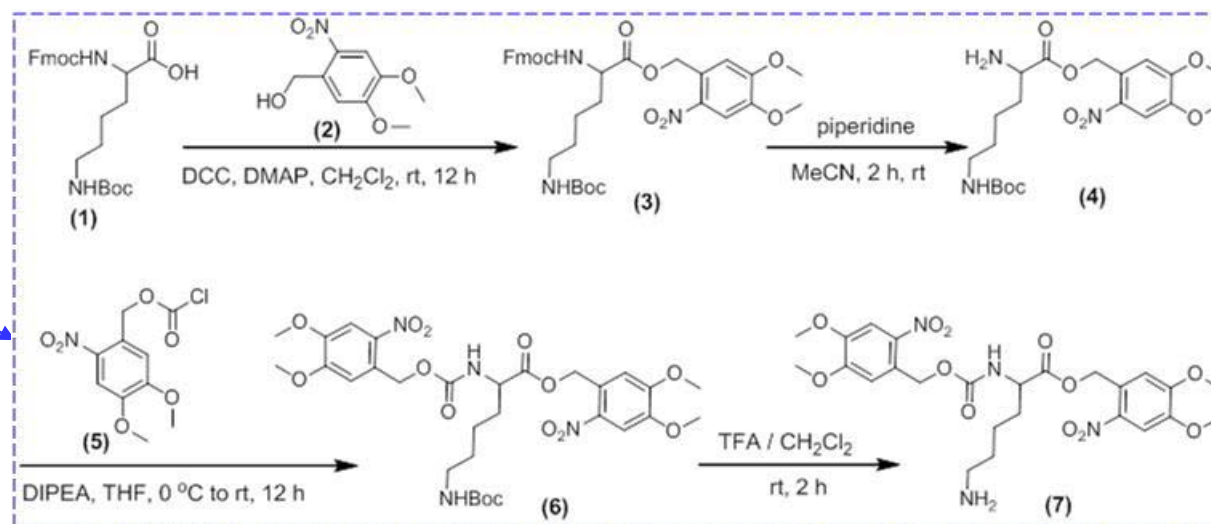


Figure 1

## Current-voltage curves of single asymmetric nanopores

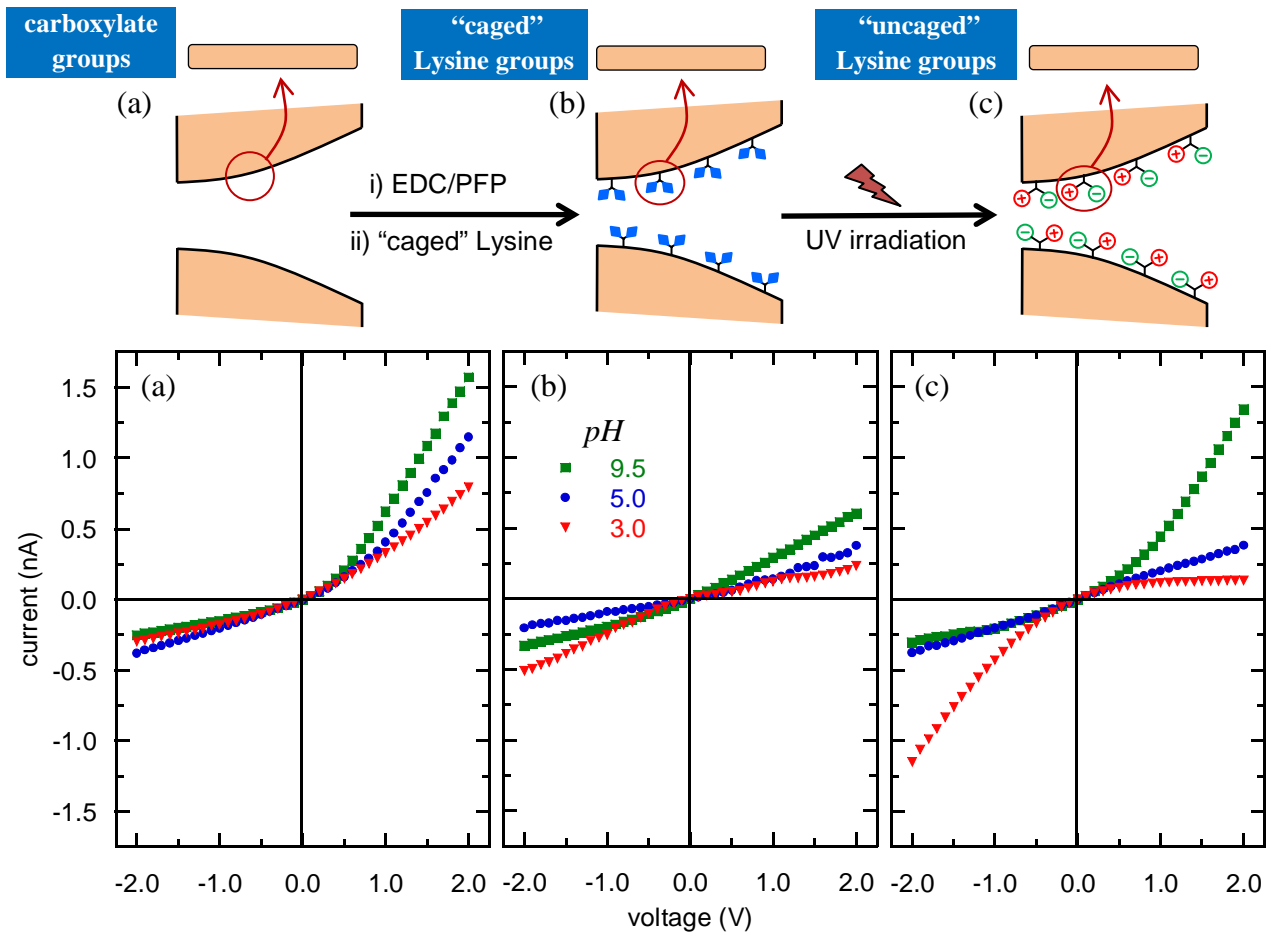
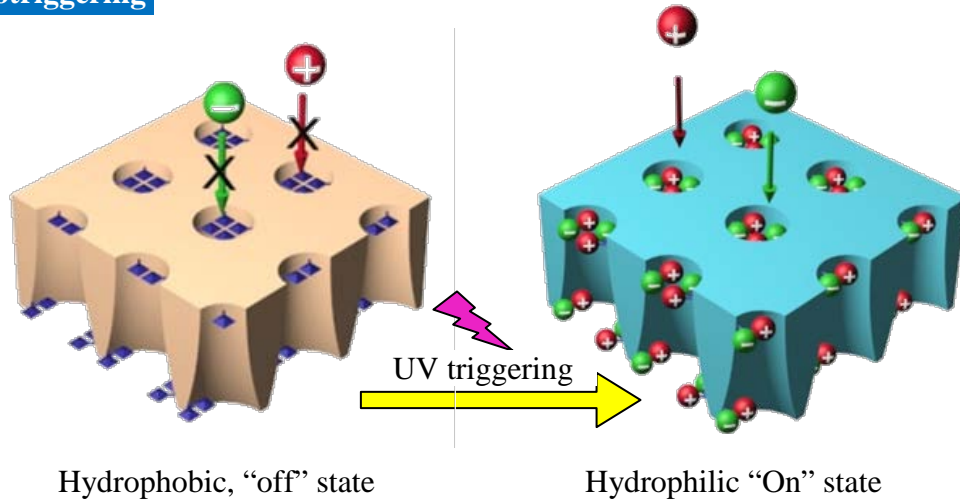


Figure 2

## Transport of ionic analytes through multipore arrays

### (a) Phototriggering



### (b) pH – tunable transport

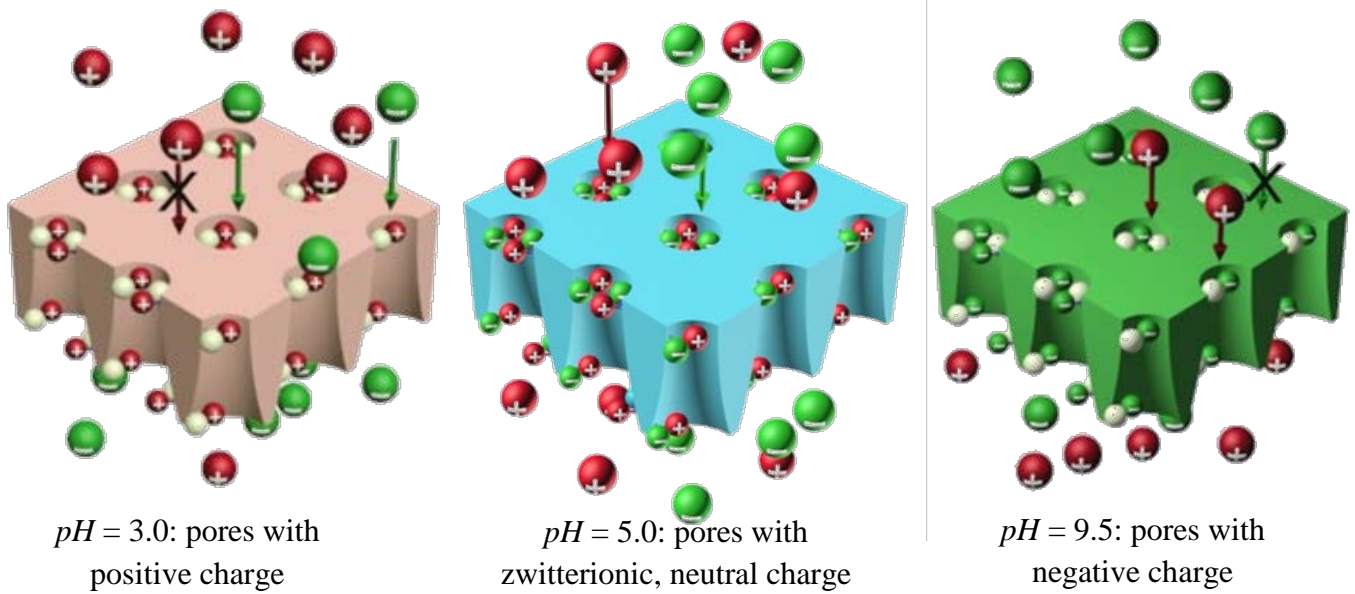


Figure 3

### Permeation data for positive analyte ( $MV^{2+}$ )

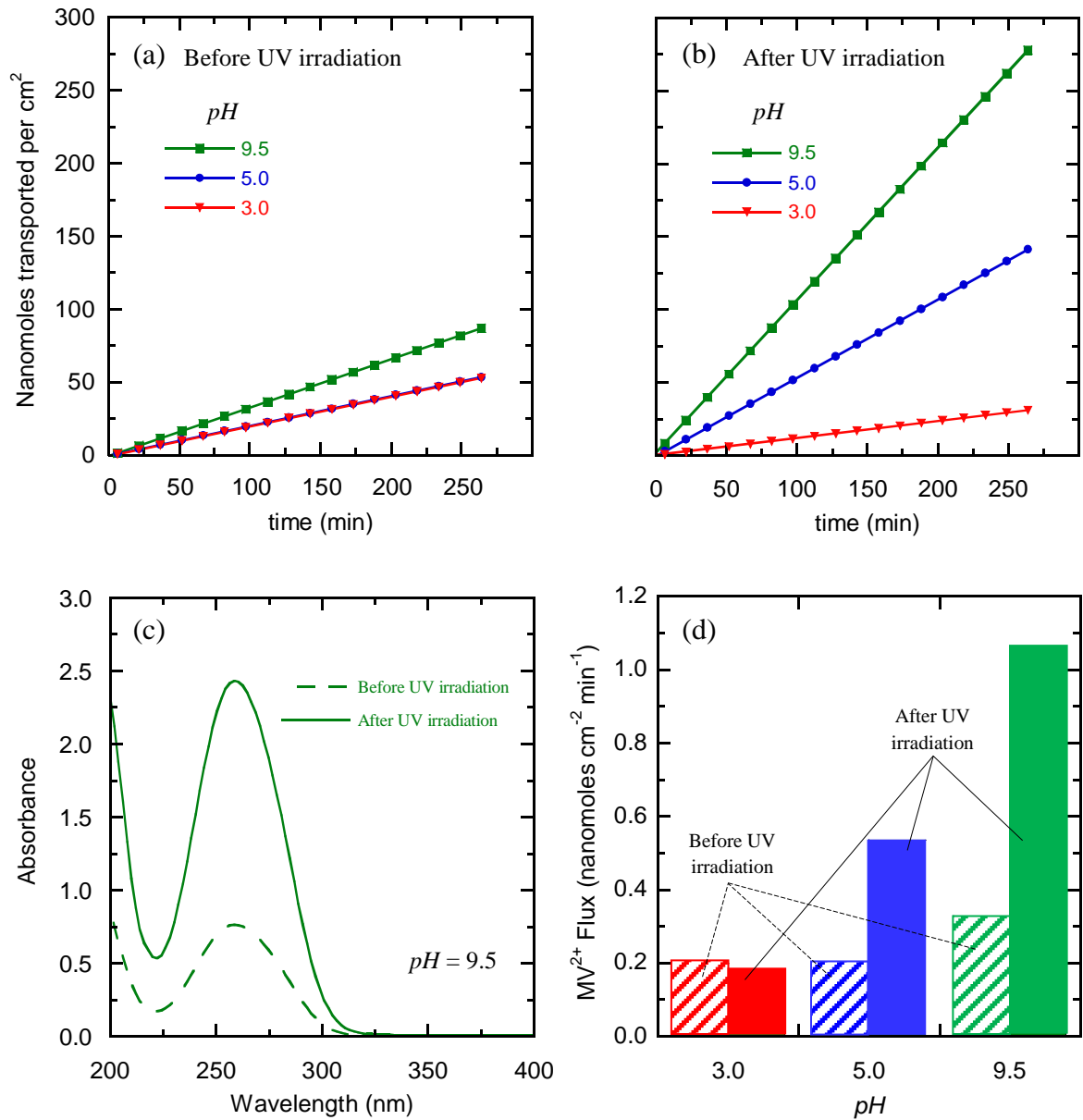


Figure 4

Permeation data for negative analyte (NDS<sup>2-</sup>)

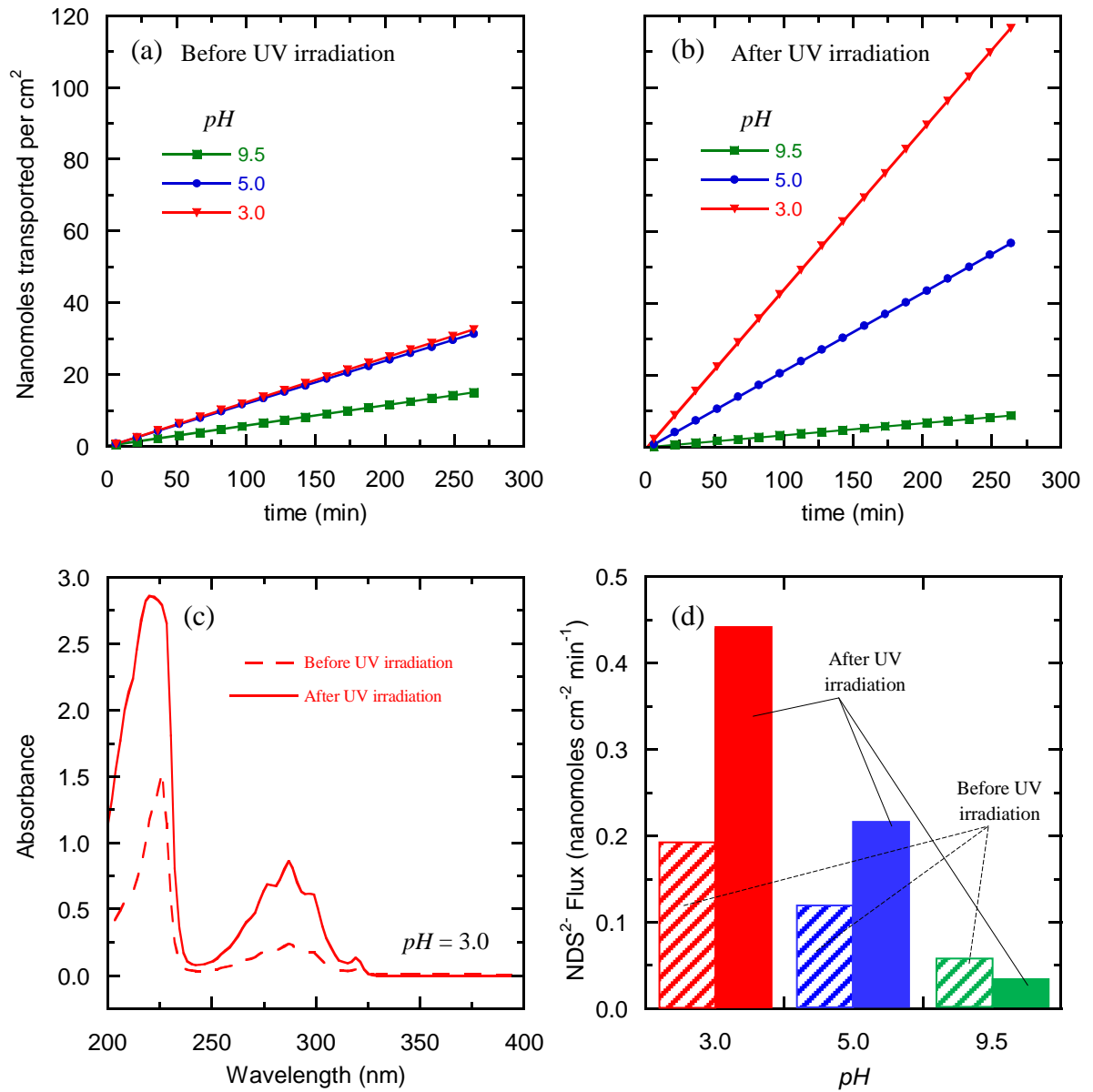


Figure 5

### Sketch of the asymmetric nanopore

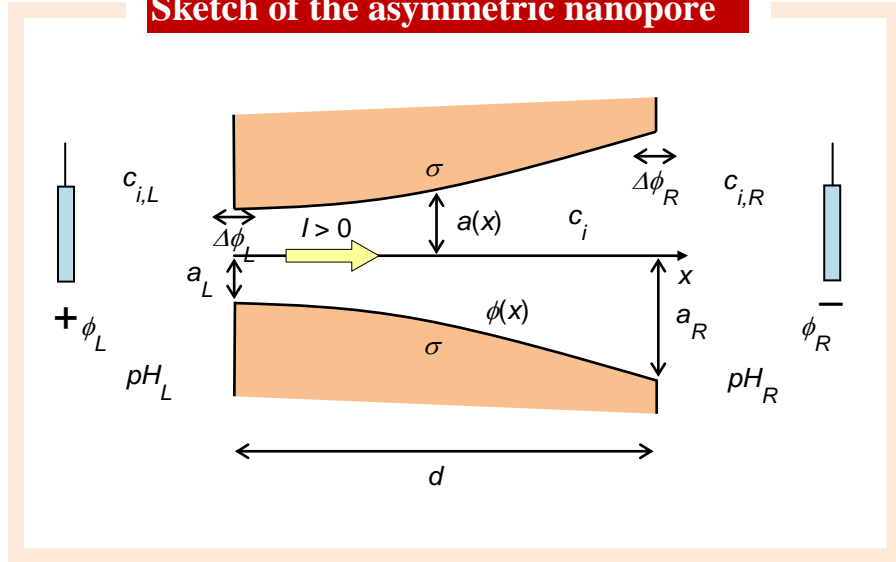


Figure 6

## Calculated current-voltage curves

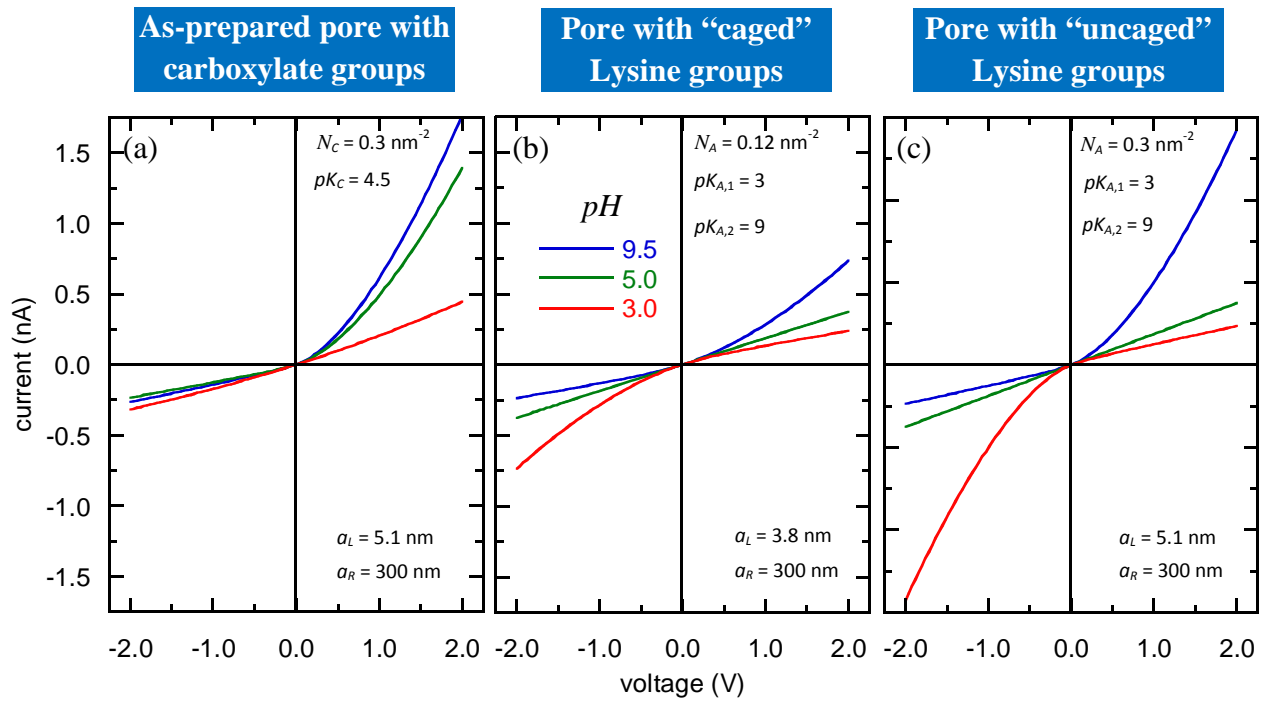


Figure 7