Supplementary Information

Article

Potentiometric Carbon Quantum Dots-Based Screen-Printed Arrays for Nano-Tracing Gemifloxacin as a Model Fluoroquinolone Implicated in Antimicrobial Resistance

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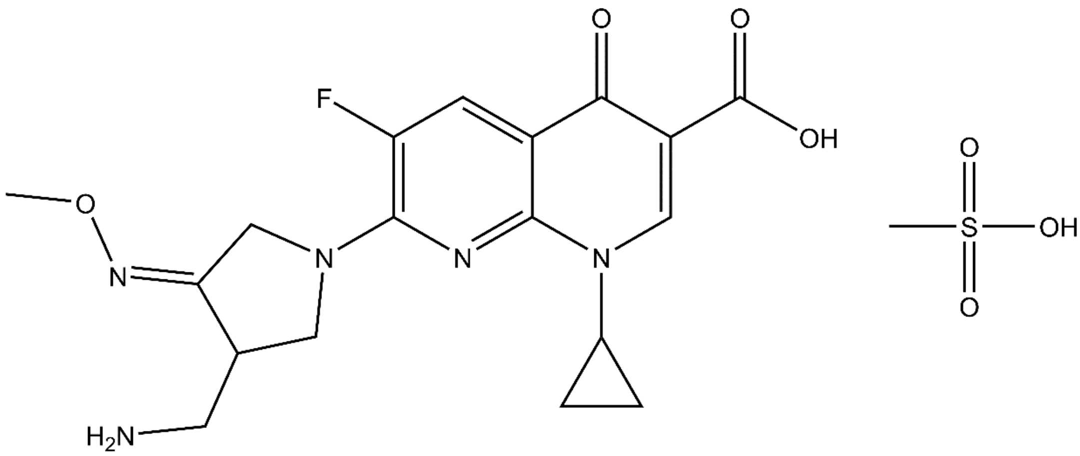


Figure S1. structure of Gemifloxacin mesylate (The compound drawn using ChemDraw).

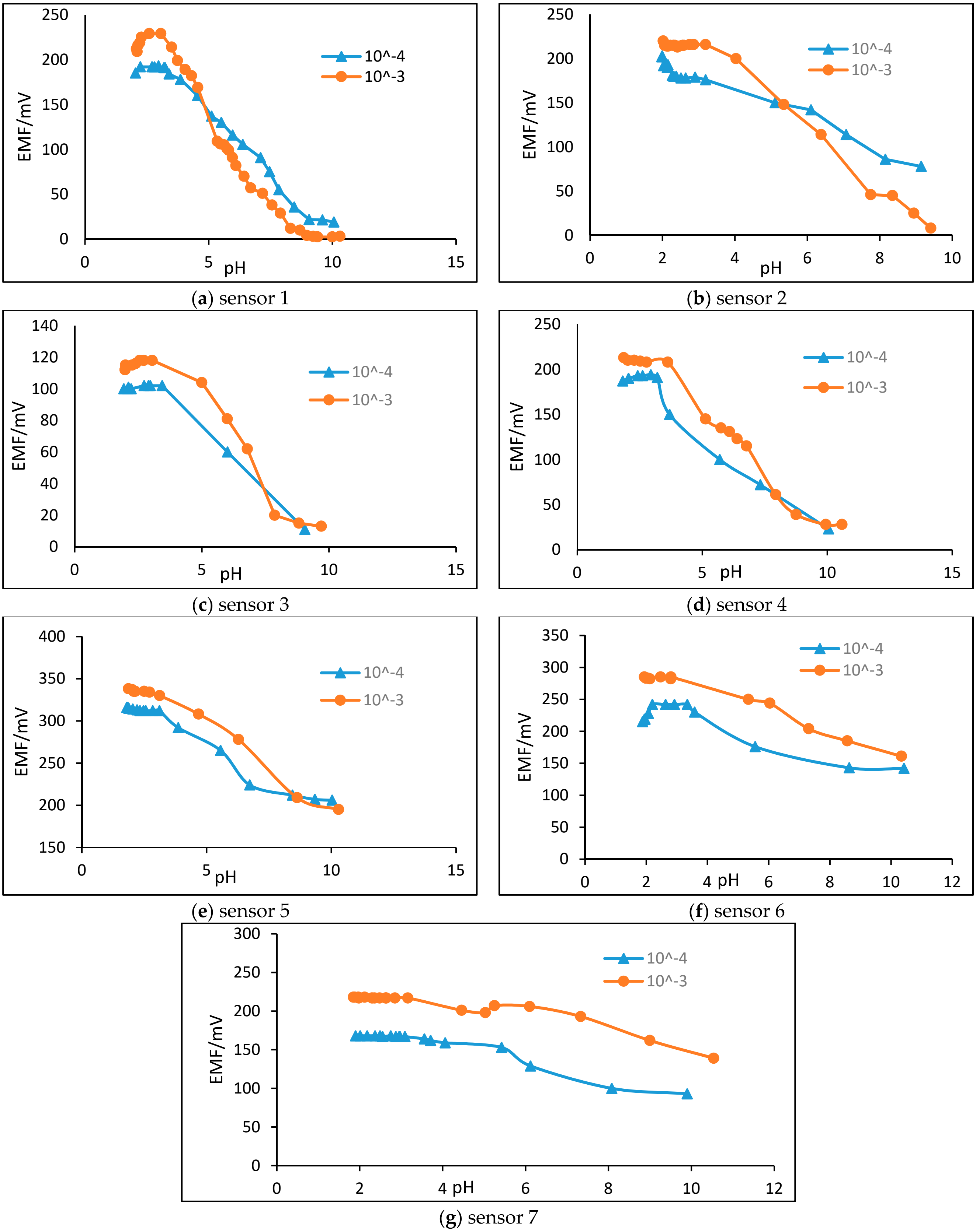
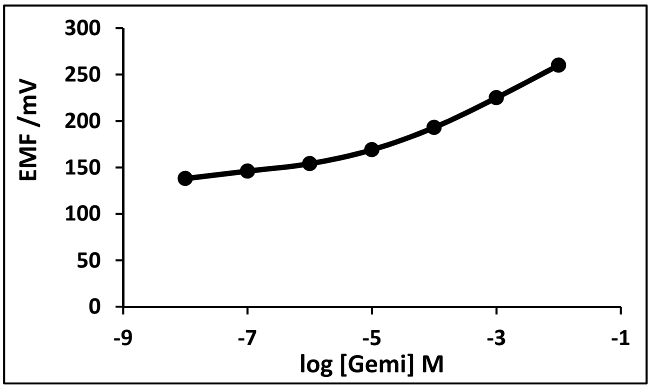
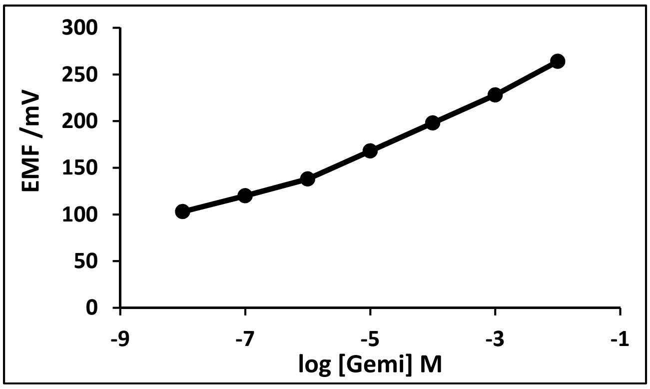


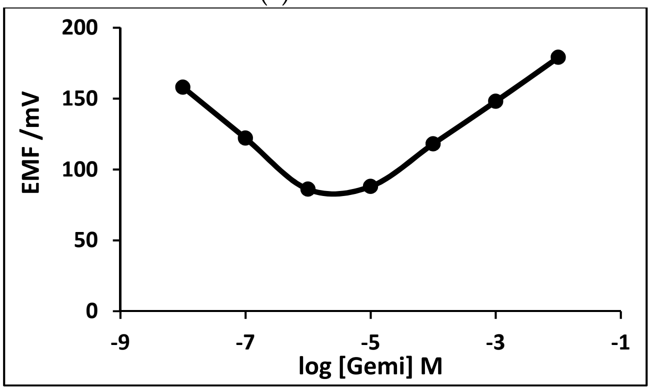
Figure S2. Influence of pH on the potentiometric response of Gemifloxacin screen-printed sensors.



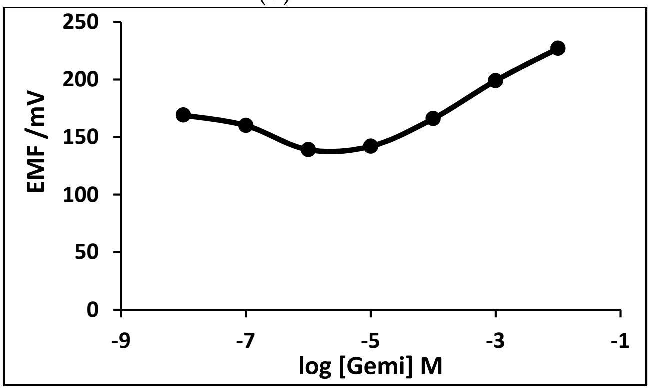
(**a**) sensor 1



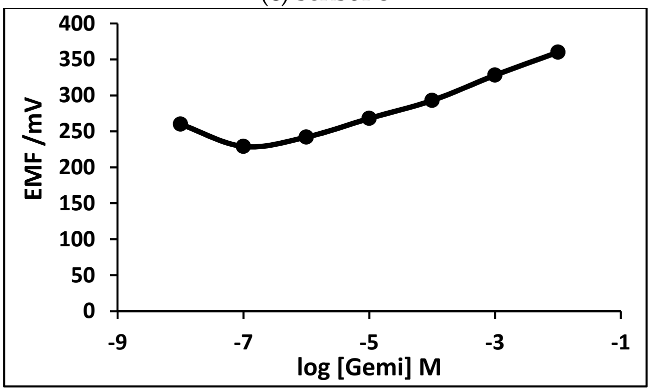
(**b**) sensor 2



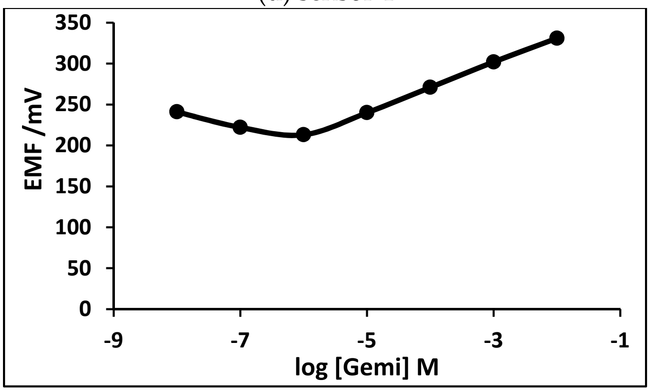
(**c**) sensor 3



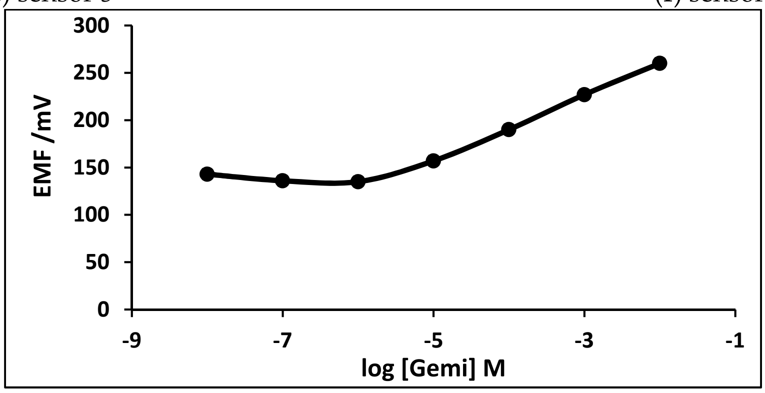
(**d**) sensor 4



(**e**) sensor 5

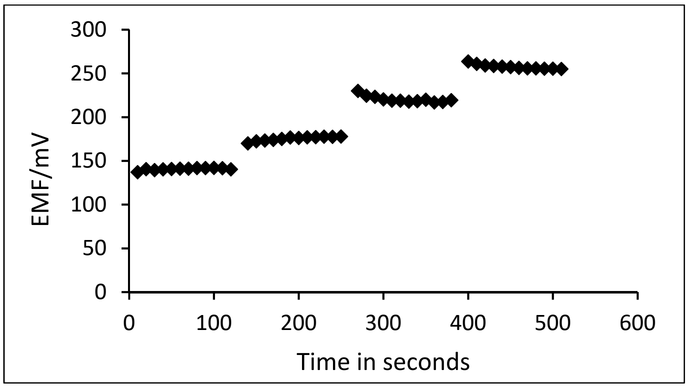


(**f**) sensor 6

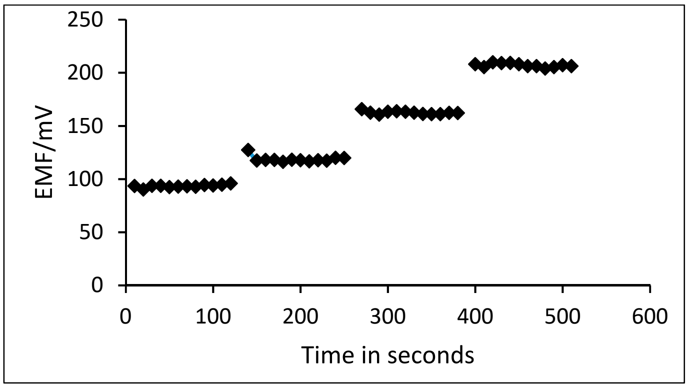


(**g**) sensor 7

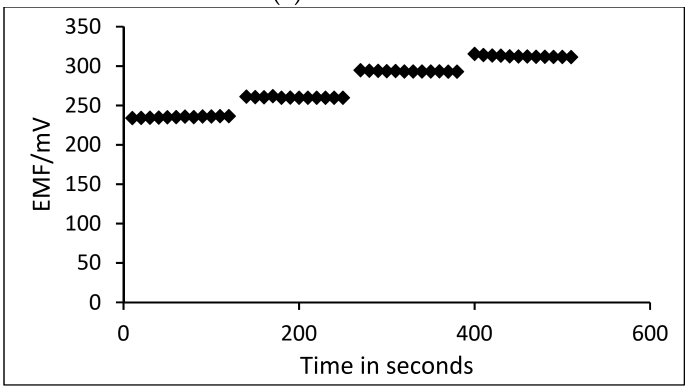
Figure S3. Potentiometric response of Gemifloxacin screen-printed sensors.



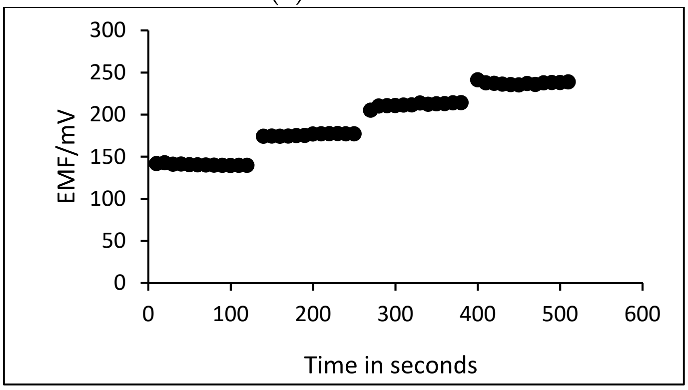
(**a**) sensor 1



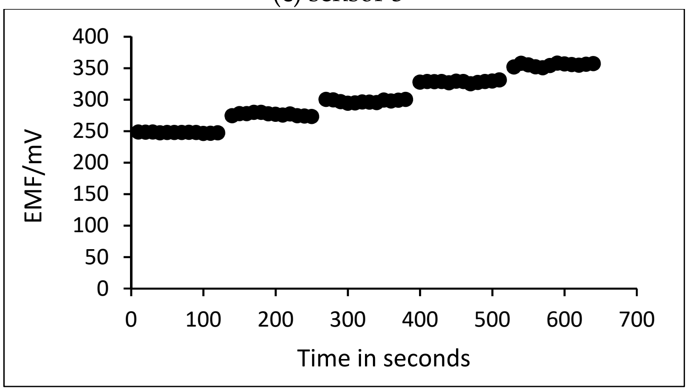
(**b**) sensor 2



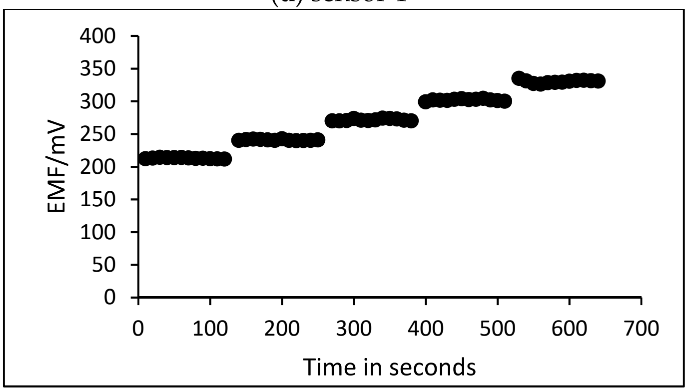
(**c**) sensor 3



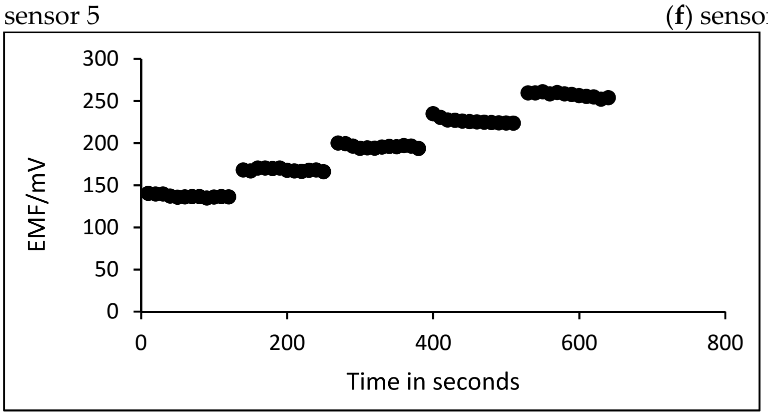
(**d**) sensor 4



(**e**) sensor 5



(**f**) sensor 6



(**g**) sensor 7

Figure S4. The dynamic response time of Gemifloxacin screen-printed sensors.

Table S1. Response characteristics of reported potentiometric sensors for Gemifloxacin.

Ionophore	Slope	Linear range	Detection limit	pH range	Ref.
Phosphotungstic acid, phosphomolybdic acid and Ammonium reineckate	55.1–57.7	1.0×10^{-7}–1.0×10^{-2} M	4.68×10^{-8}–5.13×10^{-8}	6–9	[19]
Ammonium reineckate	14.3–22.4	10^{-5}–10^{-2} M	1.1×10^{-6}–3.4×10^{-6} M	2–5	[26]
Hydroxy propyl beta cyclodextrin	33.7	0.005–10000 μM	0.1500 μM	2–3	[27]
Molecularly imprinted polymer	53.5–59.8	1×10^{-10}–1×10^{-3} M	3.6×10^{-9}–6.4×10^{-11} M	4–6	[28]