Supplementary material

Reaction-Induced Fluorogenic Sensing of Benzodiazepines: A 3D-Printed Smartphone-Based Device with Multivariate RGB Optimization

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Figures

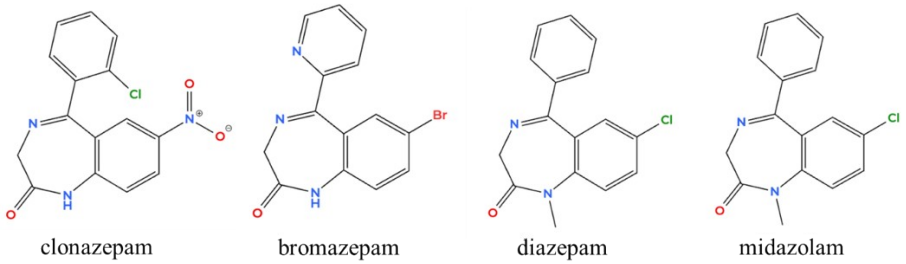

Figure S1. Chemical structures of clonazepam, bromazepam, diazepam, and midazolam.

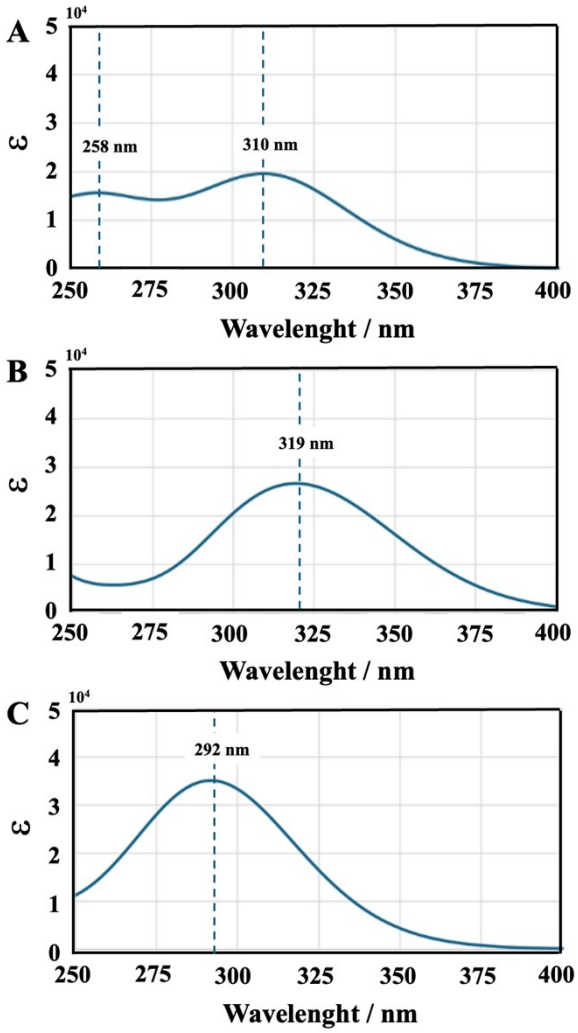

Figure S2. Theoretical TD-DFT/CPCM/PBE0/def2-SVP calculations of the UV/vis spectra of clonazepam and some key intermediates in ethanol solvent. (A) MS1; (B) MS4; and (C) MS5.

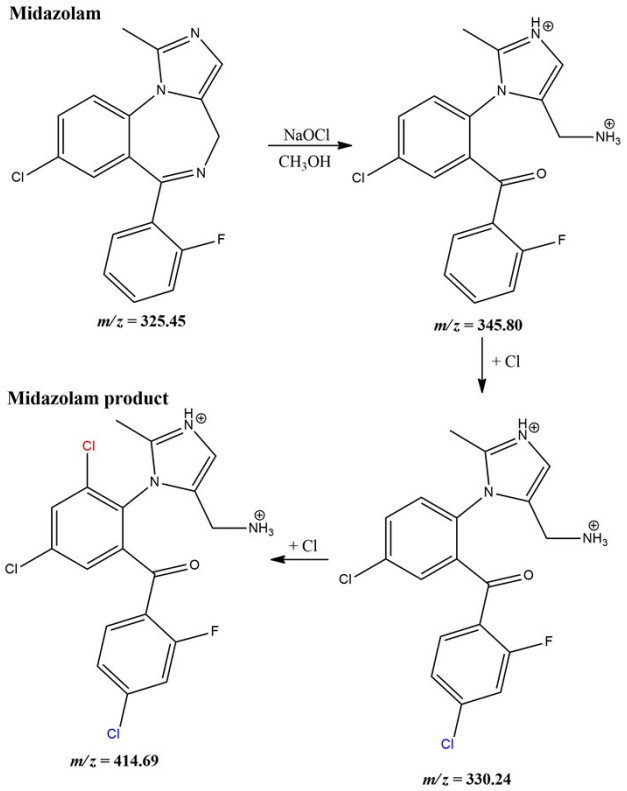

Figure S3. Proposed oxidative transformation of midazolam, including the open-ring benzophenone system and dichlorination.

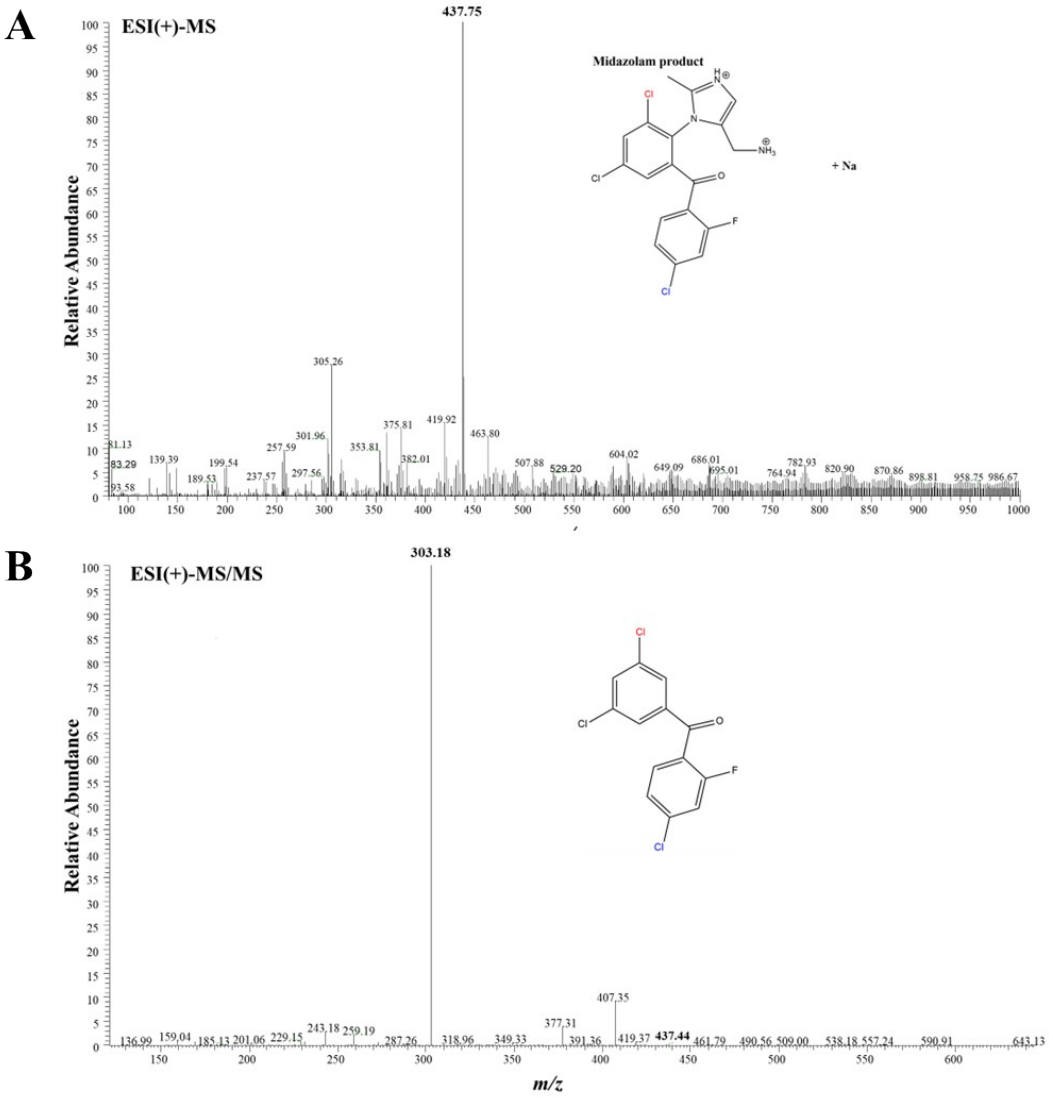

Figure S4. ESI(+)-MS and MS/MS for midazolam product obtained from reaction of midazolam with NaOCl.

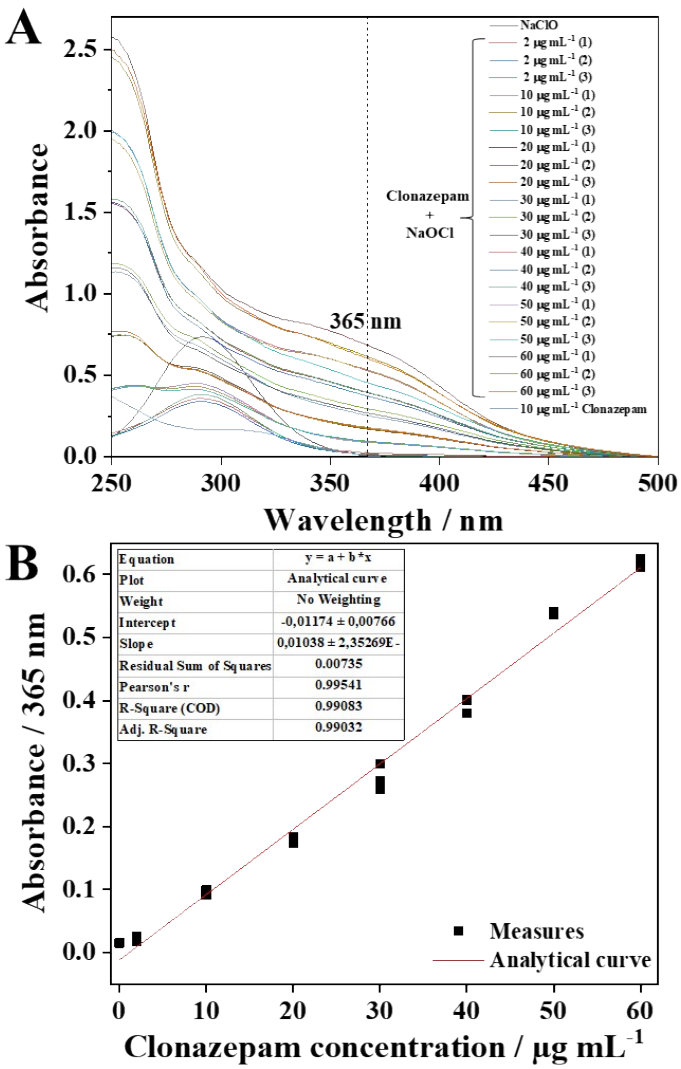

Figure S5. (A) UV-Vis spectra of clonazepam standards, of the NaOCl solution; (B) Analytical curves of the clonazepam samples at concentrations of 2, 10, 20, 30, 40, 50, and 60 µg mL^{-1} after reaction with NaOCl.

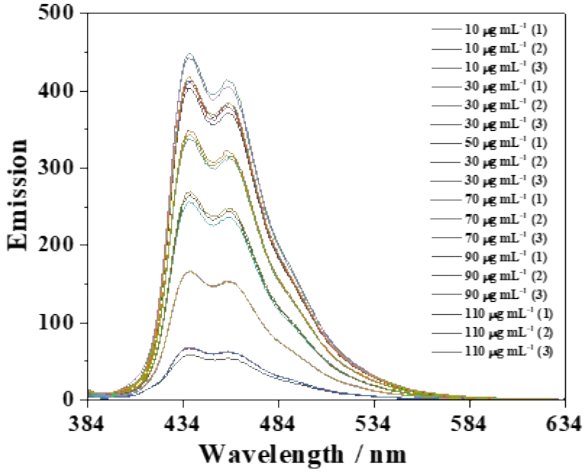

Figure S6. (A) UV-Vis spectra of the diazepam samples at concentrations of 10, 30, 50, 70, 90, and 110 µg mL^{-1} after reaction with NaOCl.

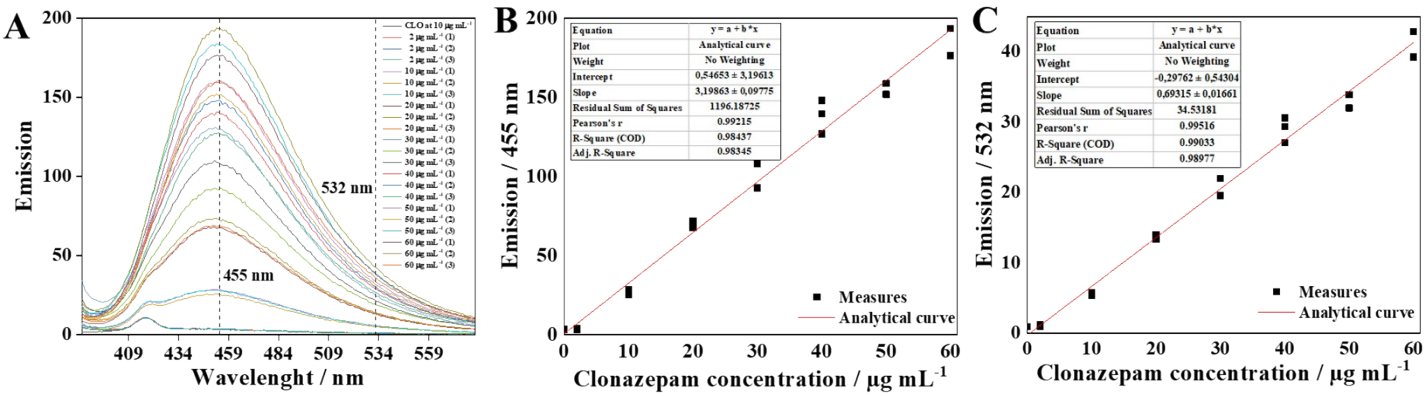

Figure S7. (A) Graphs of the emission intensities of the clonazepam samples after reaction with NaOCl, under excitation of 365 nm; Analytical curves of the samples of clonazepam at 0, 2, 10, 20, 30, 40, 50, and 60 mg mL^{-1} after reaction with NaOCl, being (B) at 455 nm and (C) at 532 nm.