Supporting Information

Nanotip Ambient Ionization Mass Spectrometry

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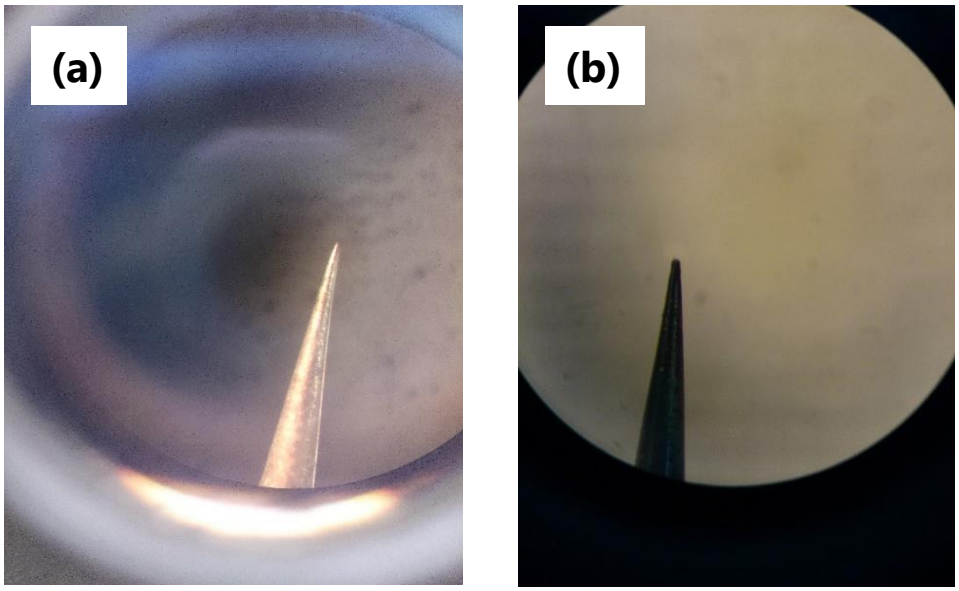

Figure S 1. (a) The new 5 µm tip (b) The same 5 µm tip after 10 hours of use. The size of the tip changed from 10±4 µm to 27±4 µm. Showing the sign of thermal damage.

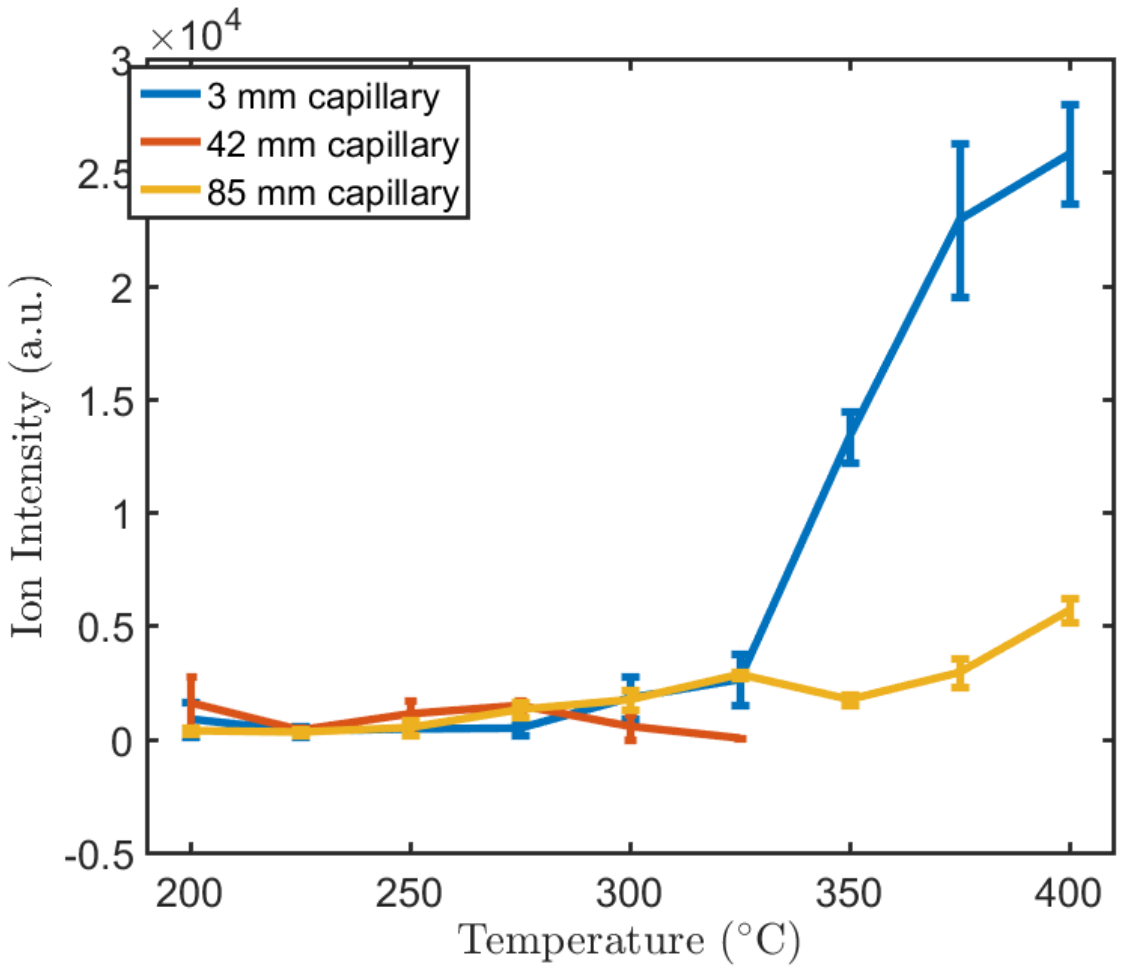

Figure S 2. The dependence of signal intensity of phenanthrene ion on temperature for different capillary lengths. The experimental conditions are U = 1 kV, R = 1 MΩ, and d = 50 μm, in which U denotes the voltage applied to the nanotip, R denotes the resistor in the circuit, and d denotes the distance between the nanotip and the conducting plate.

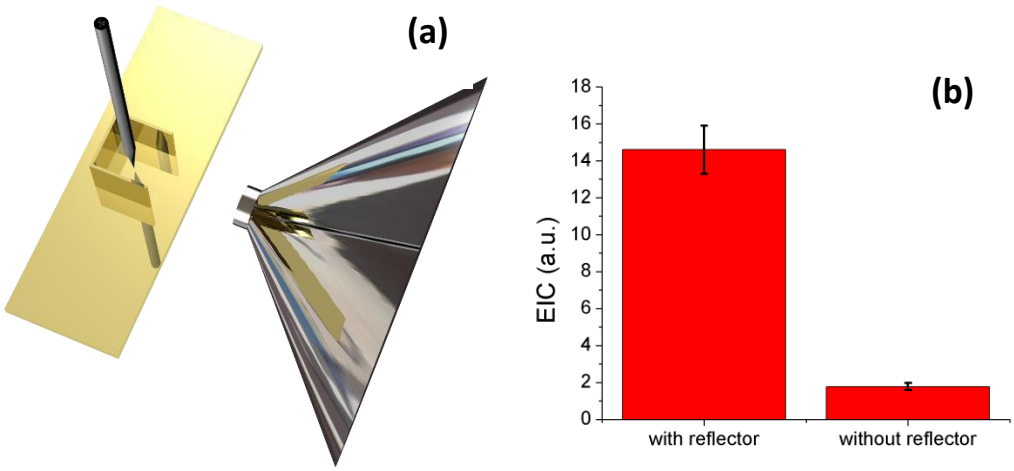

Figure S 3. (a) The design of ion reflector. 1 kV voltage was applied on the tip, 5 kV voltage was applied on the square-shaped reflector, and the plate was grounded while the reflector and the plate were insulated. The resistor in the circuit was 1 MΩ, and the distance between the tip and plate was 50 μm. (b) The ion reflector causes 8 times more signal for the detection of caffeine.