

Surface-enhanced spatially-offset Raman spectroscopy (SESORS) for detection of neurochemicals through the skull at physiologically relevant concentrations

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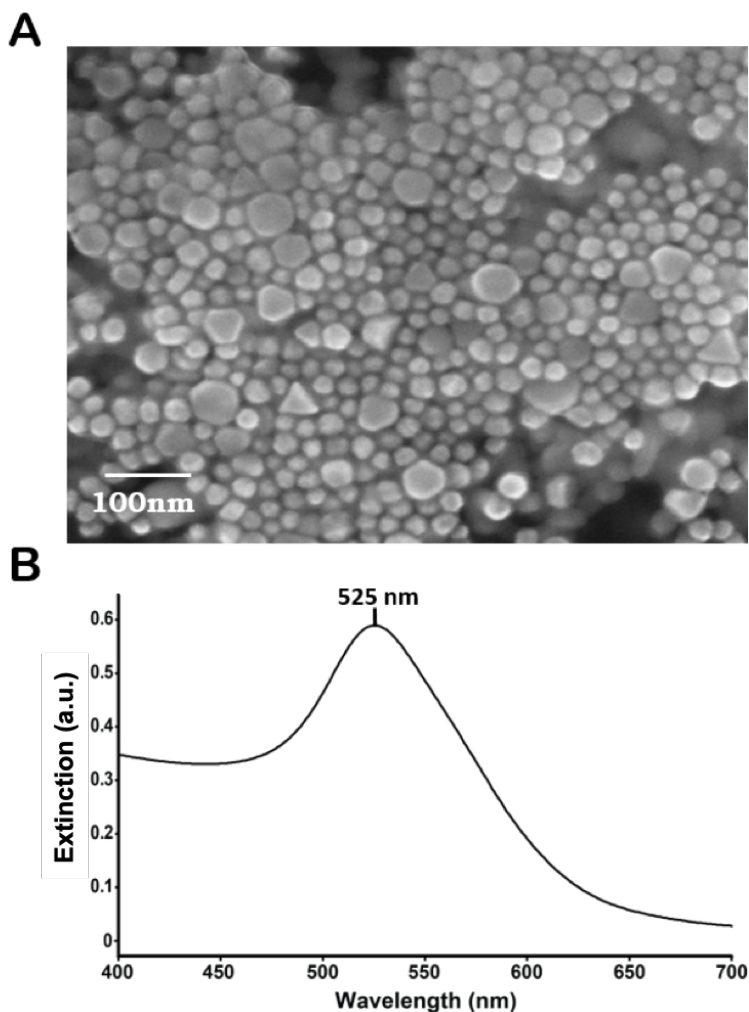


Figure S1. (A) SEM image of Au colloids. The average nanoparticle size is ~60 nm. (B) Extinction spectrum of the Au colloids, with the LSPR_{max} at 525 nm.

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† Footnotes relating to the title and/or authors should appear here.

Electronic Supplementary Information (ESI) available: [details of any supplementary information available should be included here]. See DOI: 10.1039/x0xx00000x

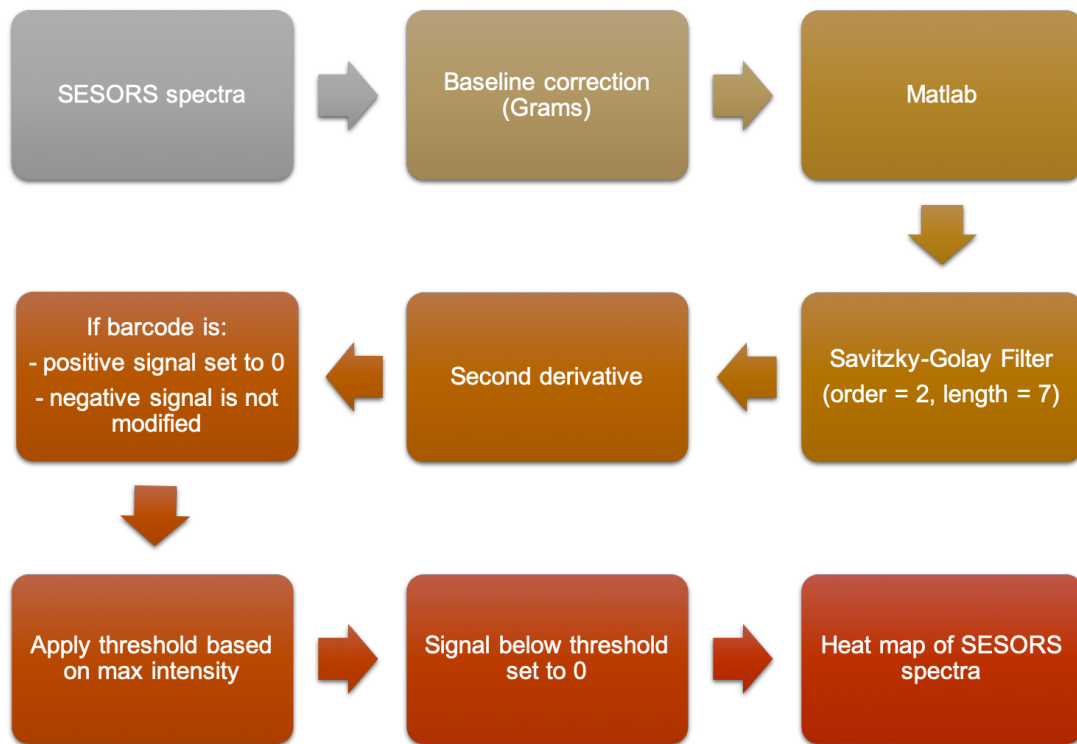


Figure S2. Flow chart explaining the data processing steps for the SESORS spectra.

TABLE 1. Chemical structures, vibrational modes (b = bending, r = rocking, w = wagging, st = stretching) and Raman peak positions (in cm^{-1}) for serotonin and melatonin.¹

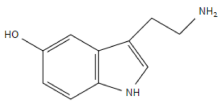
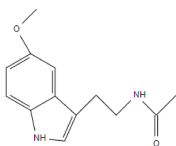
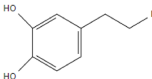
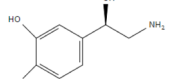
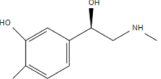
Vibrational modes	Serotonin (cm^{-1})	Melatonin (cm^{-1})
		
b _{CH}	632	648
b _{NH}	820	817
r _{OH}	1221	1224
b _{CNH}		1302
w _{HCH}	1341	1357
st _{CC}	1496	
b _{NH}	1522	
st _{CC}	1593	

TABLE 2. Chemical structures, vibrational modes (b = bending, r = rocking, w = wagging, st = stretching) and Raman peak positions (in cm^{-1}) for dopamine, norepinephrine, and epinephrine.¹

Vibrational modes	Dopamine (cm^{-1})	Norepinephrine (cm^{-1})	Epinephrine (cm^{-1})
			
r _{CH} ; COO-	589-594 ^{2, 3}		
st _{CO}	1282	1281	1272
b _{CNH}			1314
w _{HCH}	1370	1365	
st _{CC}			1485
st _{CC}	1586	1586	1596

References

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