

Exfoliation-Free Solvothermal Synthesis of ink-like MoS₂ gel for Printable Water Purification Filters

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Figure S1: Zeta potential of diluted MoS₂ ink using deionized water.

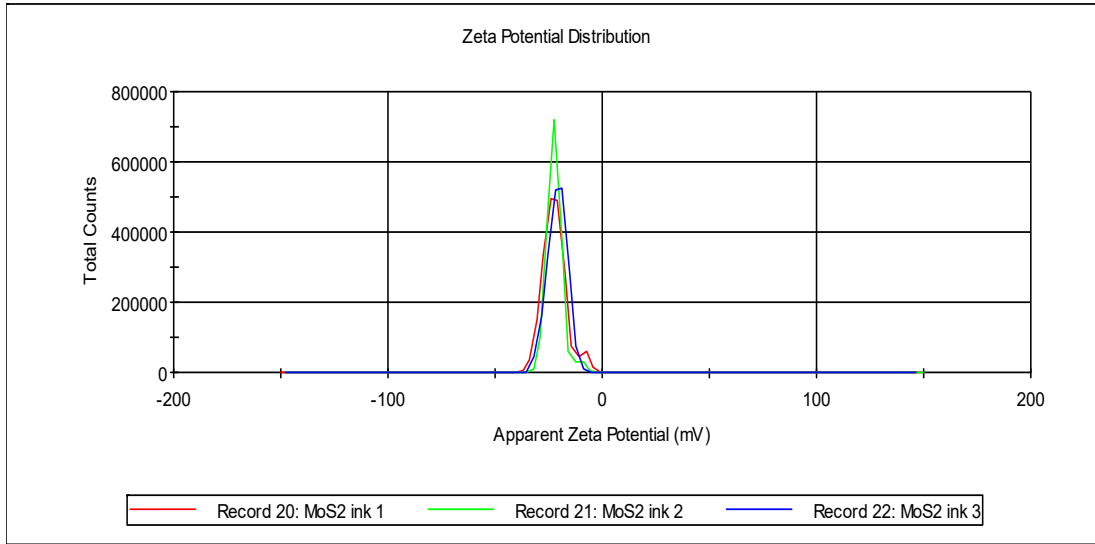


Figure S2: Zeta potential of 10 ppm Congo Red at pH 4

	Mean (mV)	Area (%)	St Dev (mV)
Zeta Potential (mV): -40.8	Peak 1: -40.8	100.0	6.36
Zeta Deviation (mV): 6.36	Peak 2: 0.00	0.0	0.00
Conductivity (mS/cm): 0.0586	Peak 3: 0.00	0.0	0.00

Result quality : Good

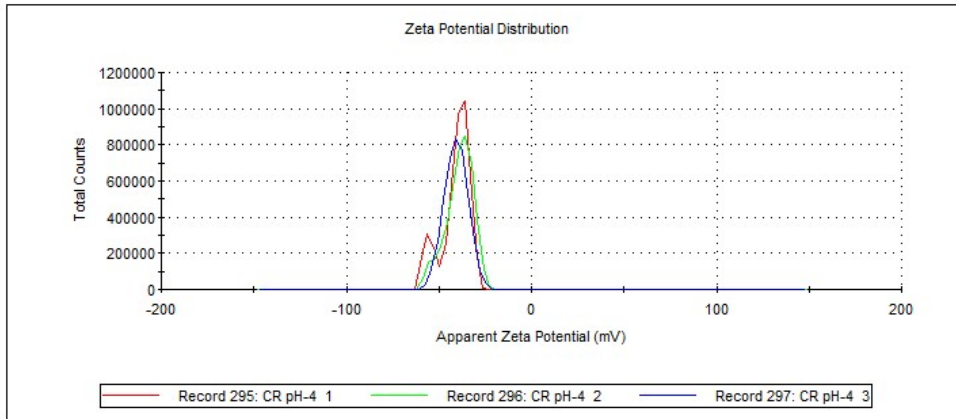


Figure S3: Zeta potential of 10 ppm Methylene Blue at pH 4

	Mean (mV)	Area (%)	St Dev (mV)
Zeta Potential (mV): 16.0	Peak 1: 16.4	96.6	4.75
Zeta Deviation (mV): 5.48	Peak 2: -0.880	3.4	2.63
Conductivity (mS/cm): 0.0650	Peak 3: 0.00	0.0	0.00

Result quality : **Good**

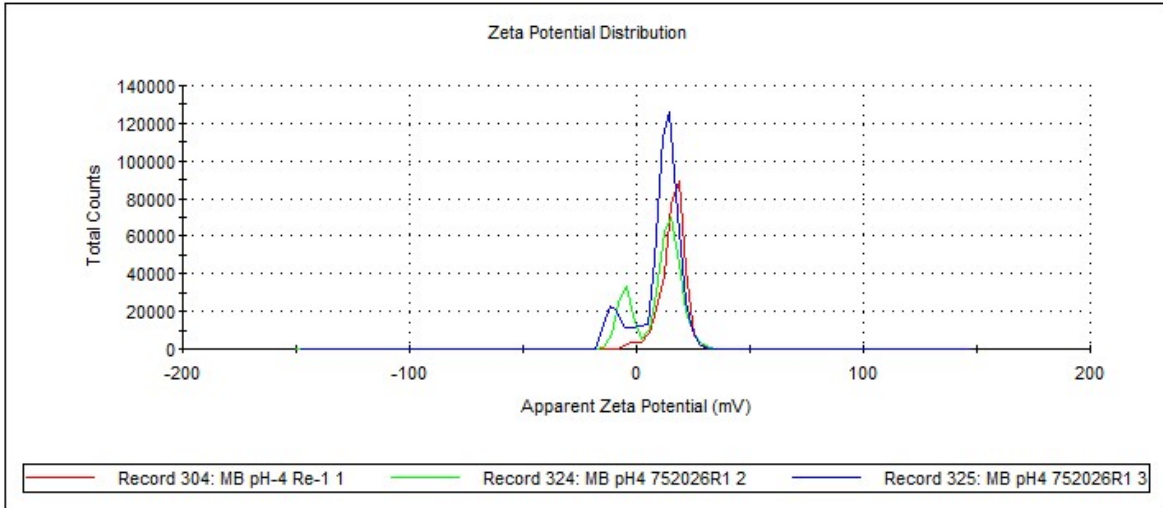


Figure S4: Zeta potential of 10 ppm Cr⁶⁺ at pH 4

	Mean (mV)	Area (%)	St Dev (mV)
Zeta Potential (mV): -12.9	Peak 1: -10.7	87.6	4.31
Zeta Deviation (mV): 7.78	Peak 2: -29.3	11.2	4.39
Conductivity (mS/cm): 0.0856	Peak 3: -42.8	1.2	2.39

Result quality : **Good**

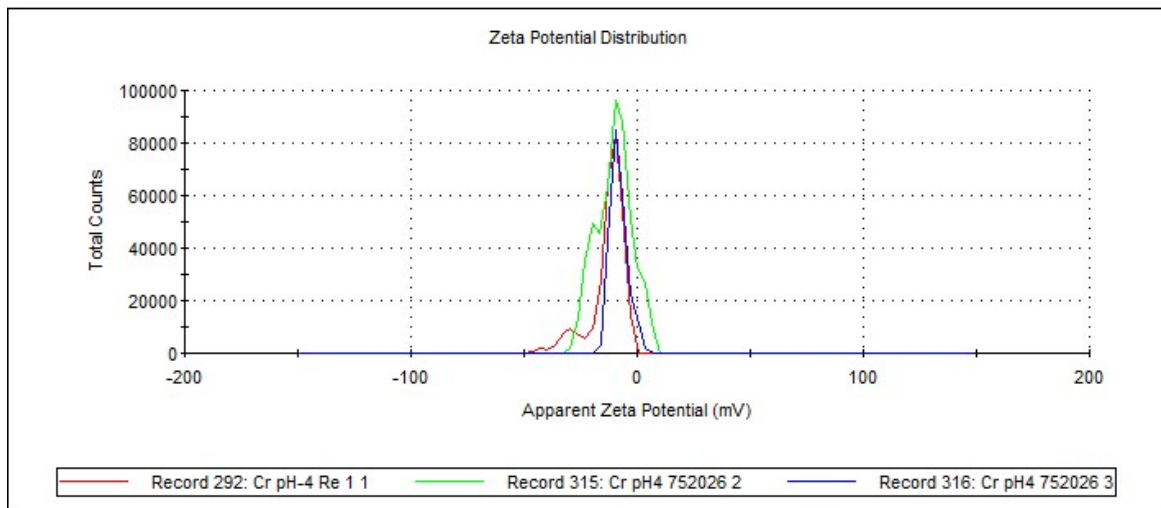


Figure S5: Zeta potential of 10 ppm Congo Red at pH 7

	Mean (mV)	Area (%)	St Dev (mV)
Zeta Potential (mV): -52.8	Peak 1: -52.8	100.0	5.80
Zeta Deviation (mV): 5.80	Peak 2: 0.00	0.0	0.00
Conductivity (mS/cm): 0.0316	Peak 3: 0.00	0.0	0.00

Result quality : **Good**

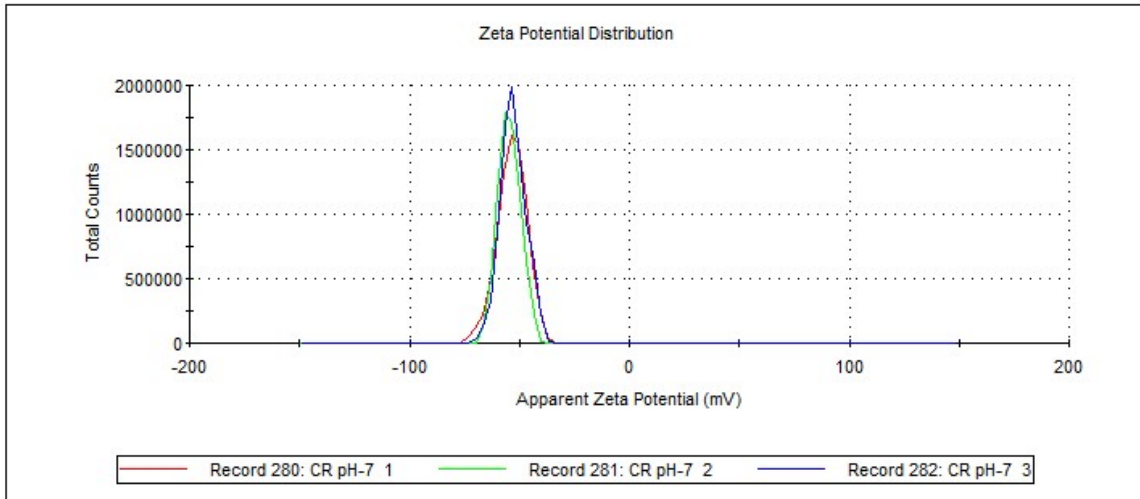


Figure S6: Zeta potential of 10 ppm Methylene Blue at pH 7

	Mean (mV)	Area (%)	St Dev (mV)
Zeta Potential (mV): -7.37	Peak 1: -7.37	100.0	5.74
Zeta Deviation (mV): 5.74	Peak 2: 0.00	0.0	0.00
Conductivity (mS/cm): 0.00554	Peak 3: 0.00	0.0	0.00

Result quality : **Good**

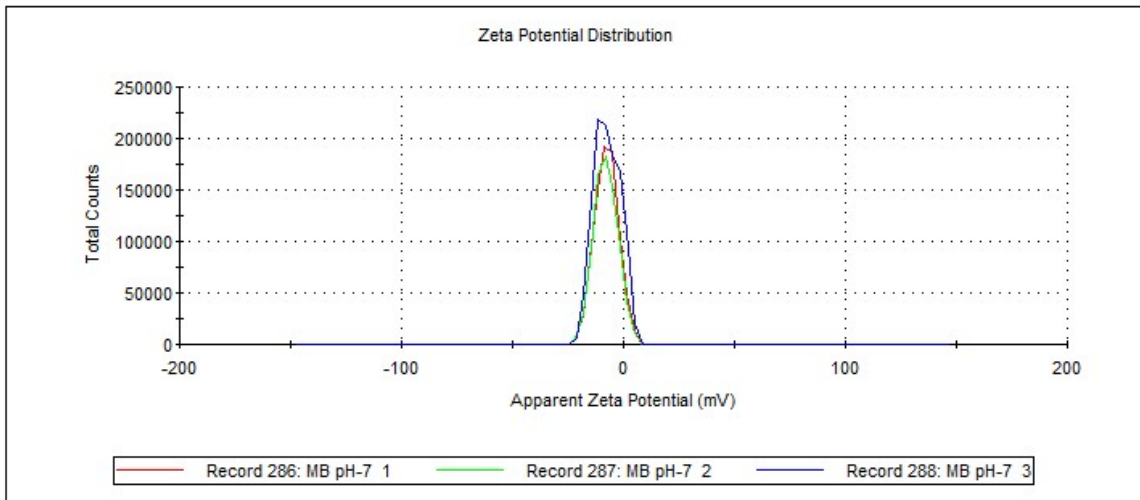


Figure S7: Zeta potential of 10 ppm Cr⁶⁺ at pH 7

	Mean (mV)	Area (%)	St Dev (mV)
Zeta Potential (mV): -17.0	Peak 1: -36.2	76.6	10.3
Zeta Deviation (mV): 85.5	Peak 2: -86.8	3.5	6.94
Conductivity (mS/cm): 0.0638	Peak 3: 103	3.1	4.66

Result quality : See result quality report

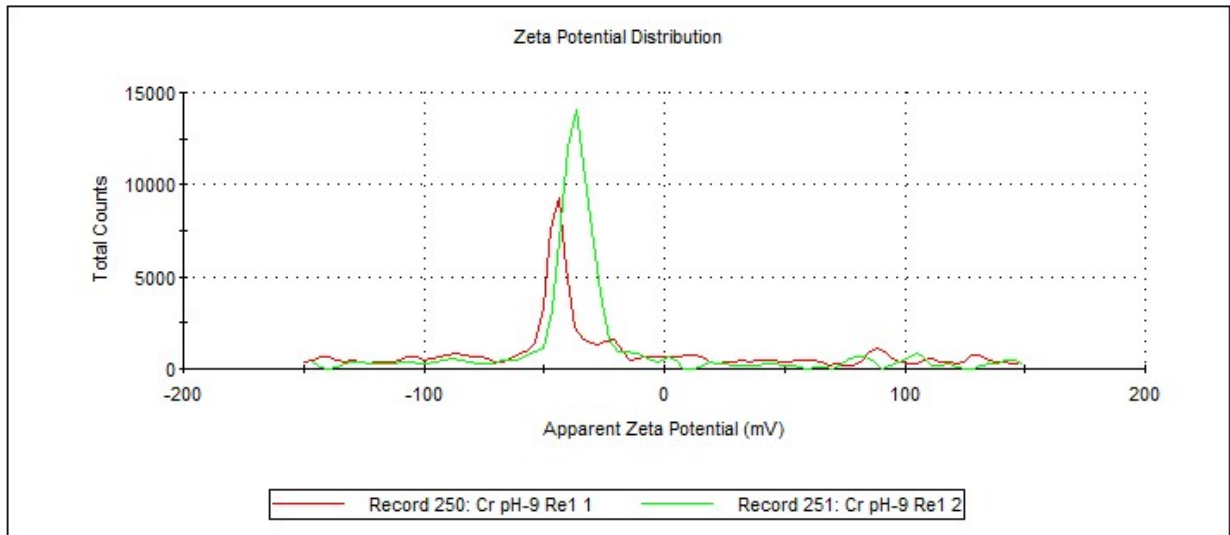


Figure S8: Zeta potential of 10 ppm Congo Red at pH 9

	Mean (mV)	Area (%)	St Dev (mV)
Zeta Potential (mV): -65.5	Peak 1: -65.5	100.0	7.40
Zeta Deviation (mV): 7.40	Peak 2: 0.00	0.0	0.00
Conductivity (mS/cm): 0.0348	Peak 3: 0.00	0.0	0.00

Result quality : Good

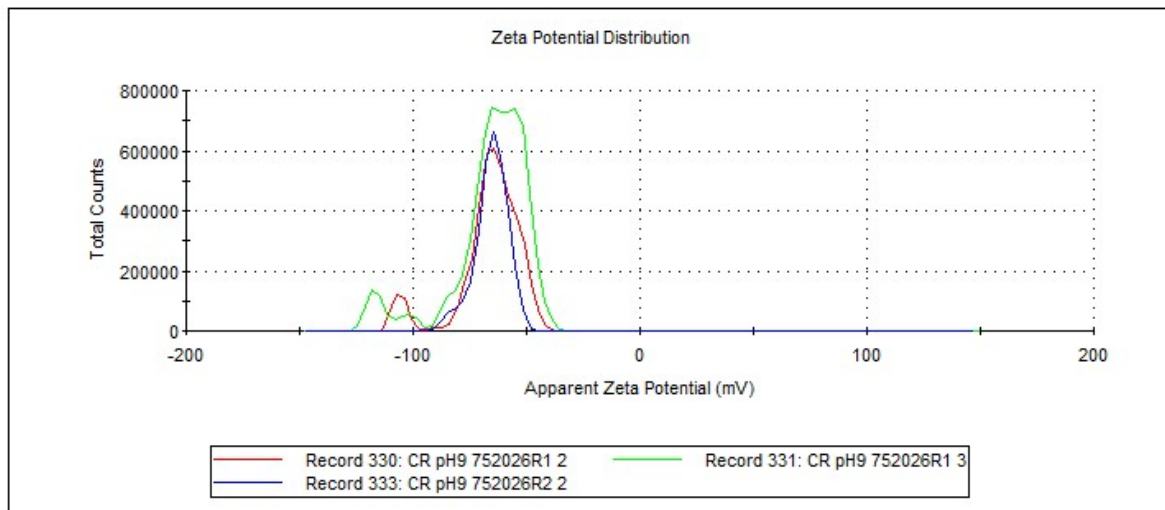


Figure S9: Zeta potential of 10 ppm Methylene Blue at pH 9

	Mean (mV)	Area (%)	St Dev (mV)
Zeta Potential (mV): -9.41	Peak 1: -9.41	100.0	6.09
Zeta Deviation (mV): 6.09	Peak 2: 0.00	0.0	0.00
Conductivity (mS/cm): 0.0412	Peak 3: 0.00	0.0	0.00

Result quality : **Good**

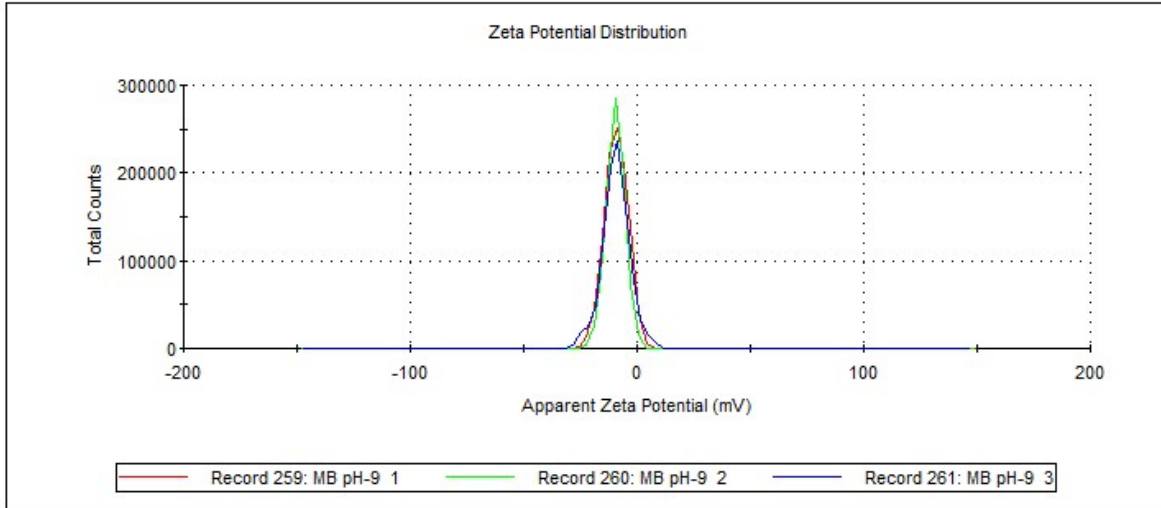


Figure S10: Zeta potential of 10 ppm Cr⁶⁺ at pH 9

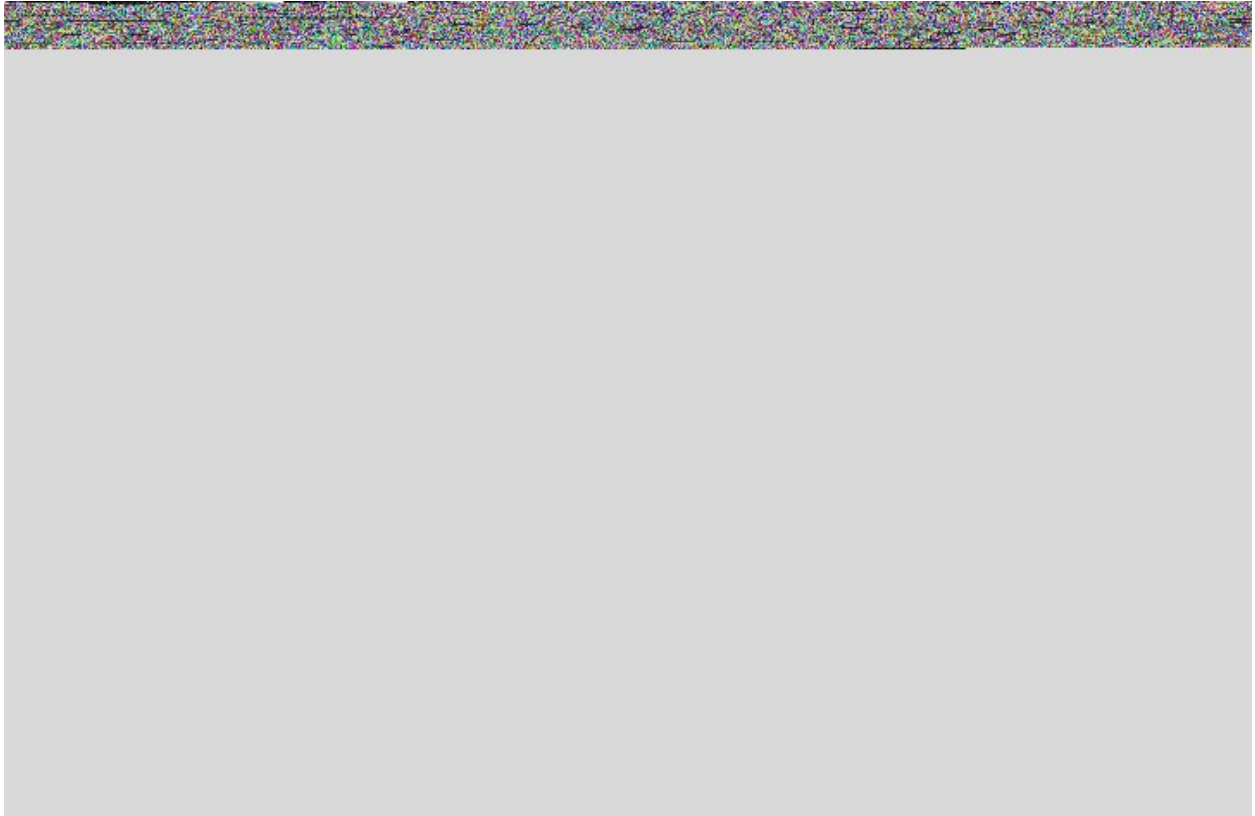


Table S1: Zeta potential values for the contaminants at varied pH

Contaminant	Zeta Potential in mV		
	pH 4	pH 7	pH 9
CR	-40.8	-52.8	-65.5
MB	+16.0	-7.37	-9.41
Cr	-12.9	-2.66	-17.0