

## SUPPORTING INFORMATION

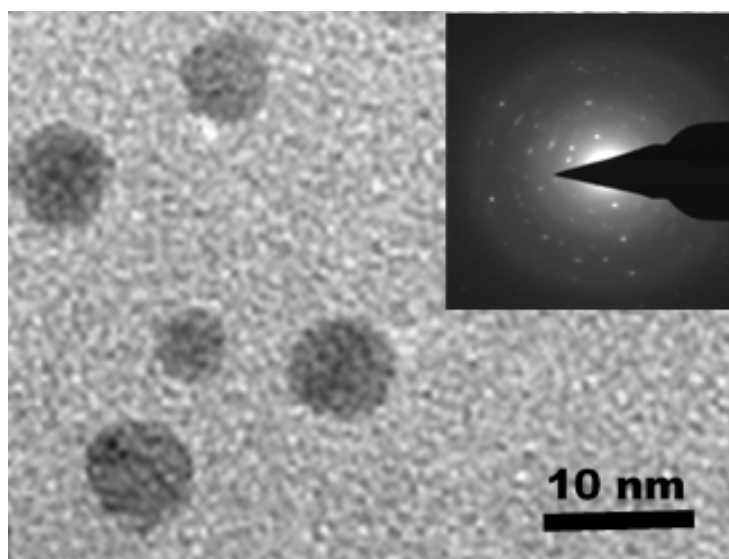
### **Development of an ammonia sensor based on silver nanoparticles in a poly-methacrylic acid matrix**

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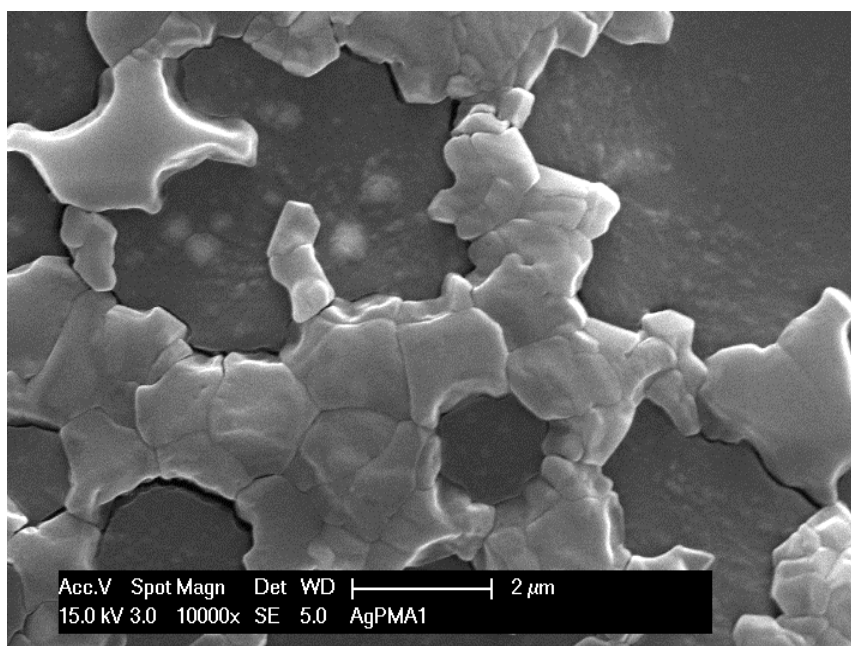
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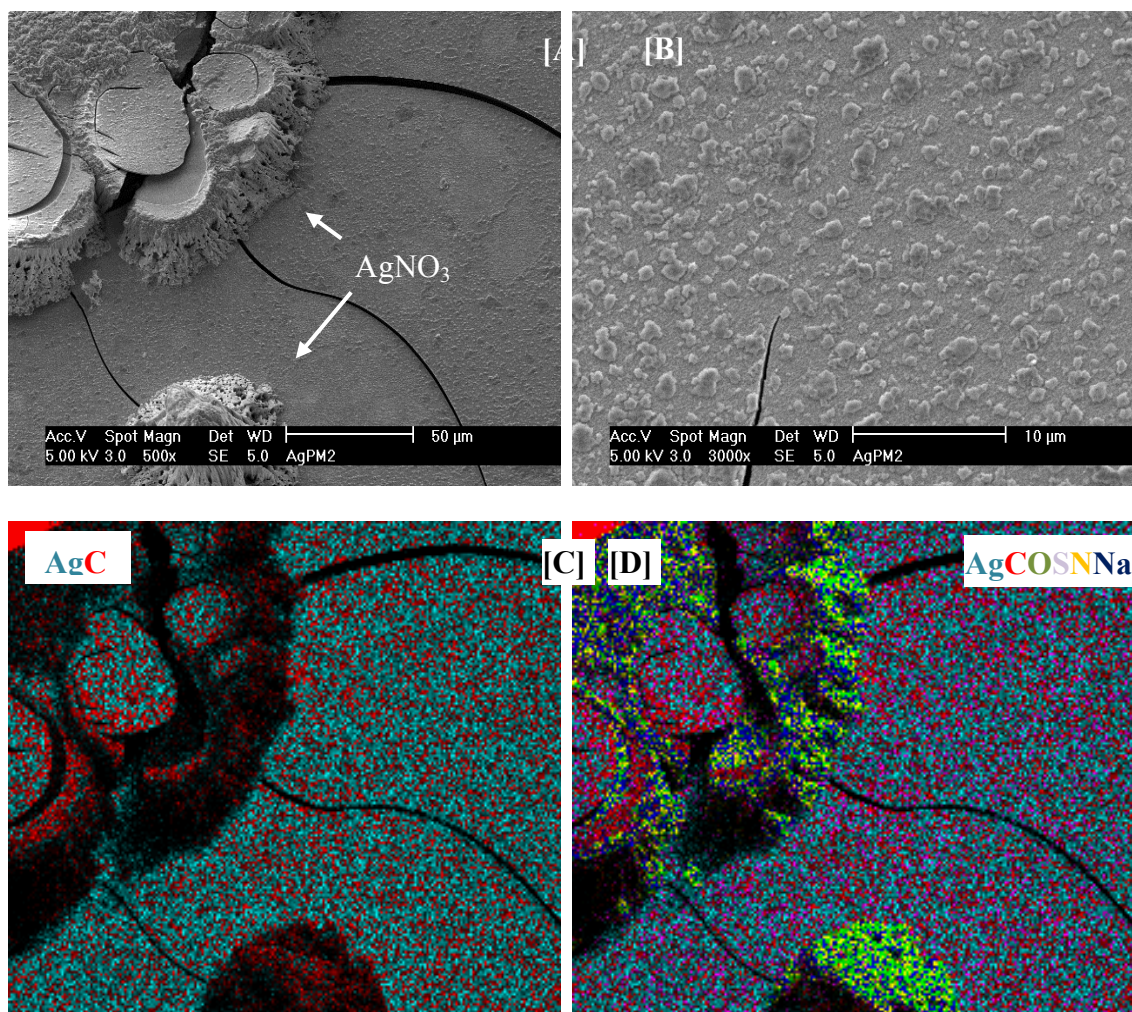
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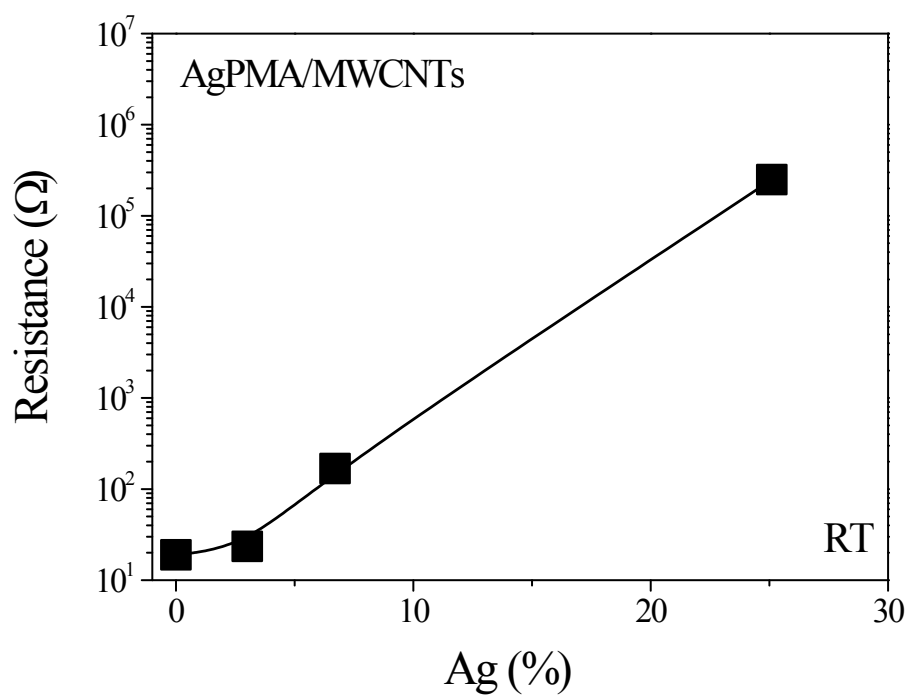
**Fig. S1.** TEM image of Ag1PMA film showing isolated Ag nanoparticles in the PMA matrix. Inside is shown the SAED pattern of one of these particles.



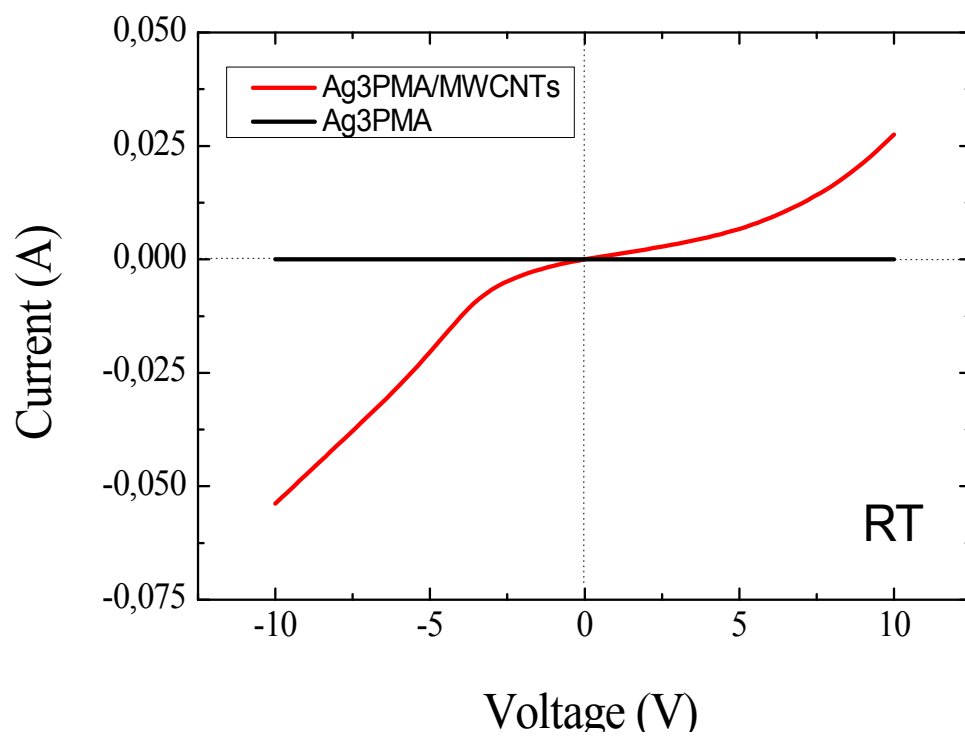
**Fig. S2.** SEM image of Ag1PMA film at higher magnification showing details of dendritic Ag structures.



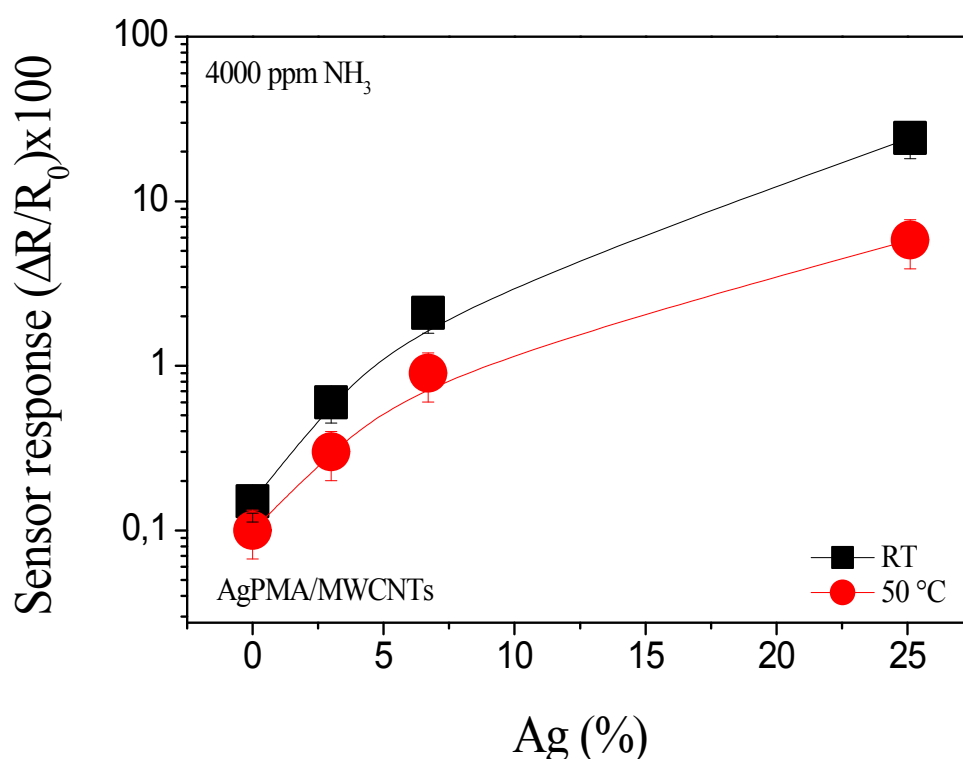
**Fig. S3.** SEM images of Ag<sub>2</sub>PMA film along with EDX measurements [A-B] and mapping analysis [C-D].



**Fig. S4.** Comparison of baseline resistance (in air) of fabricated sensors as a function of Ag loading at RT.



**Fig. S5.** I-V characteristics of Ag3PMA/MWCNTs films



**Fig. S6.** Comparison of sensor response towards 4000 ppm of NH<sub>3</sub> as a function of Ag loading at RT and 50 °C.