

Supplementary Materials

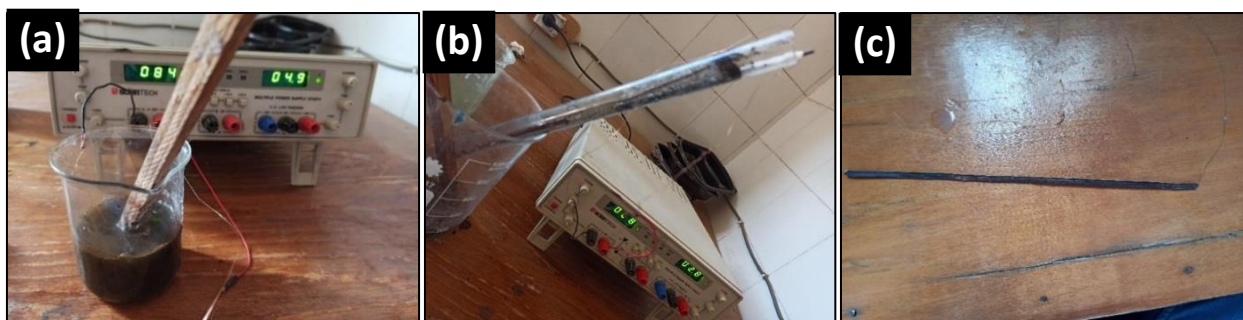


Figure S1. (a) electroplating of inner conductor, (b) electroplating of outer conductor, (c) result from electroplating.

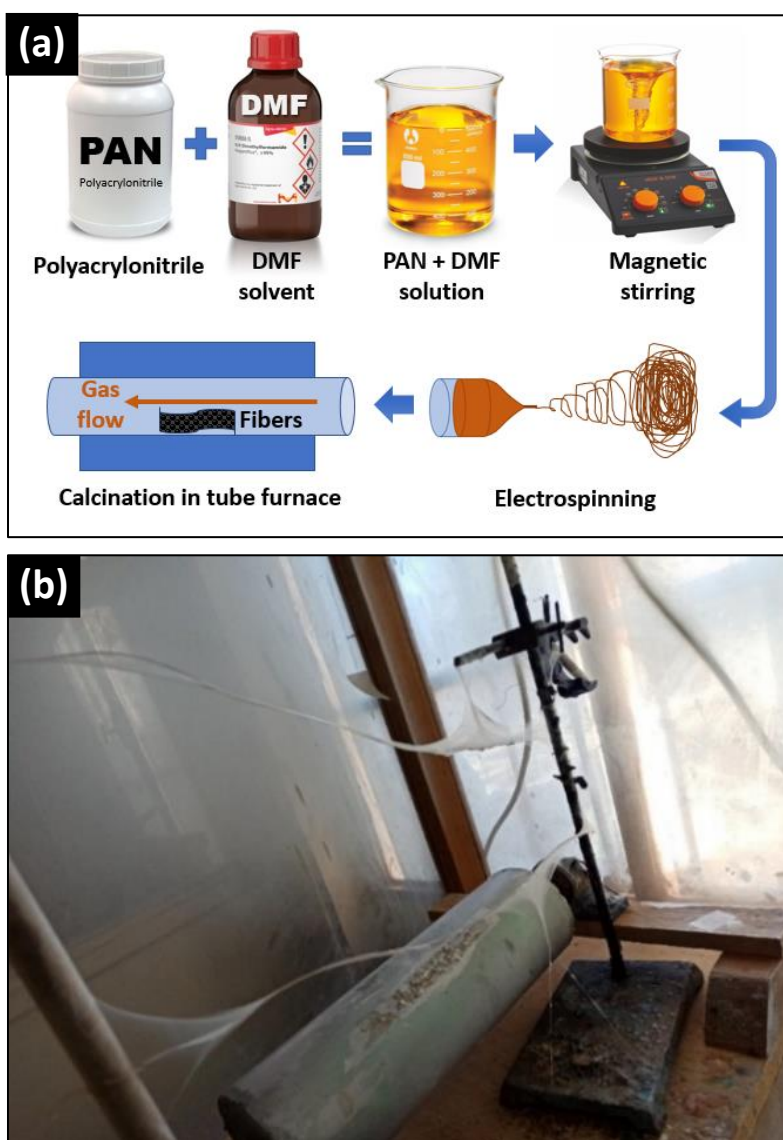


Figure S2. (a) a schematic for the electrospinning process. (b) PAN nanofibers on the inner and outer conductor.

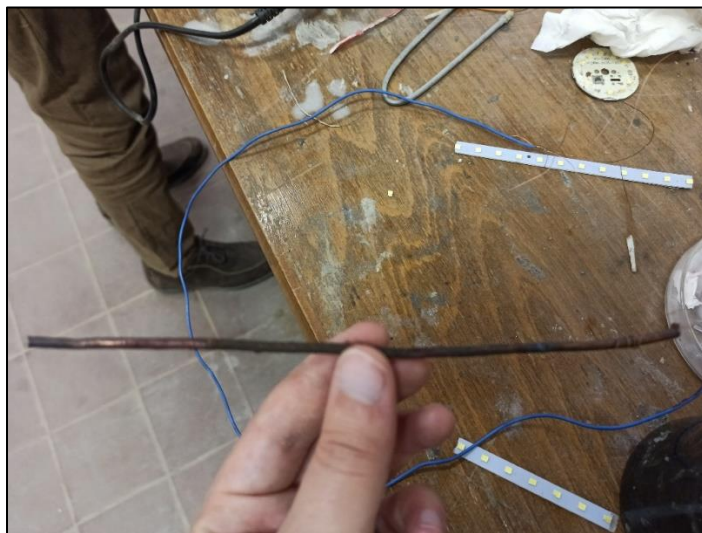


Figure S3. The result from calcination of the outer conductor.



Figure S4. Electrospinning of the inner conductor to be inserted into the outer conductor.



Figure S5. The final shape of the proposed antenna