## Supplementary Information

# Titania Nanofibers in Gypsum Composites: An Antibacterial and Cytotoxicology Study

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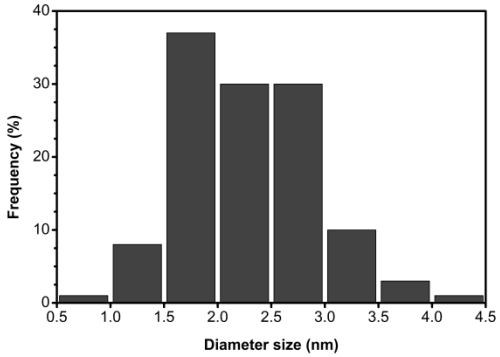


Figure SI-1. Diameter size distribution of palladium nanoparticles on titania nanofibers.

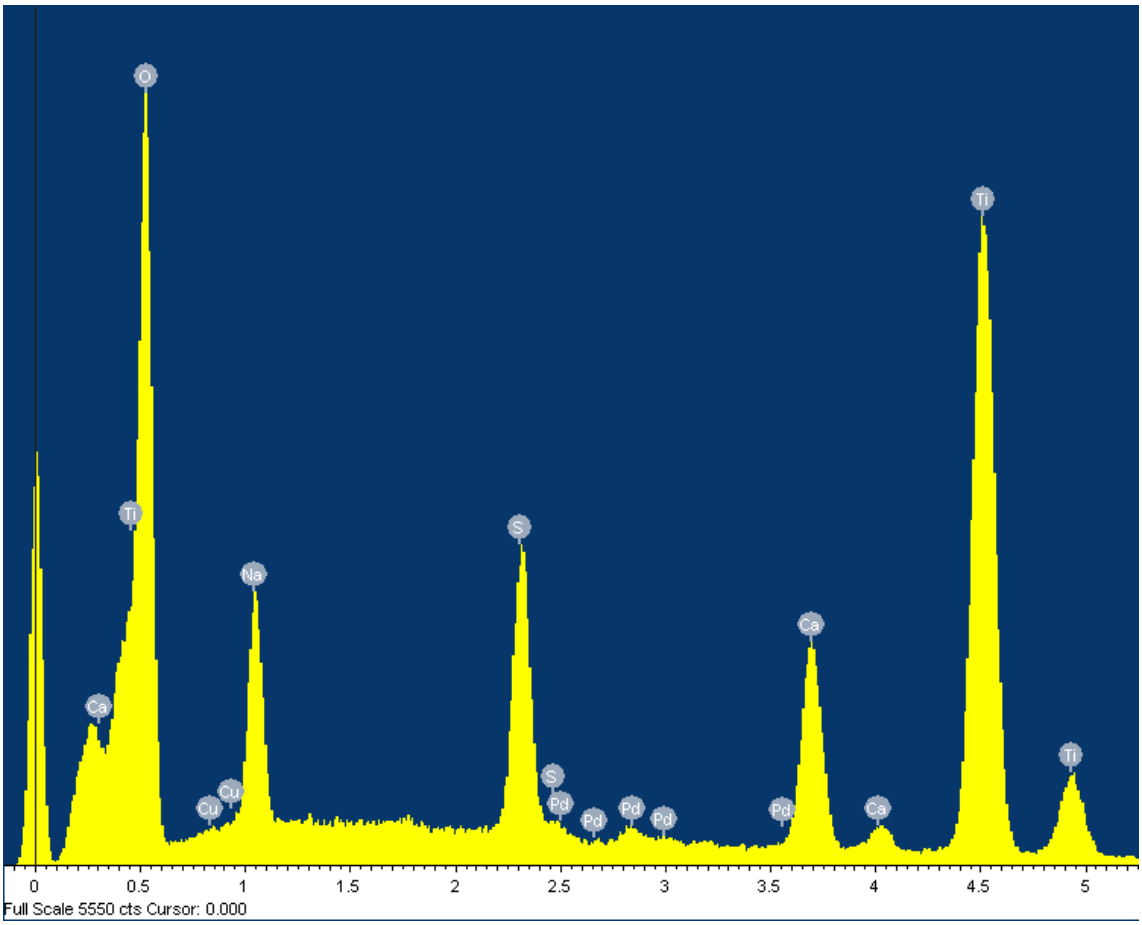


Figure SI-2. EDX spectrum of GTCPdOR composite.

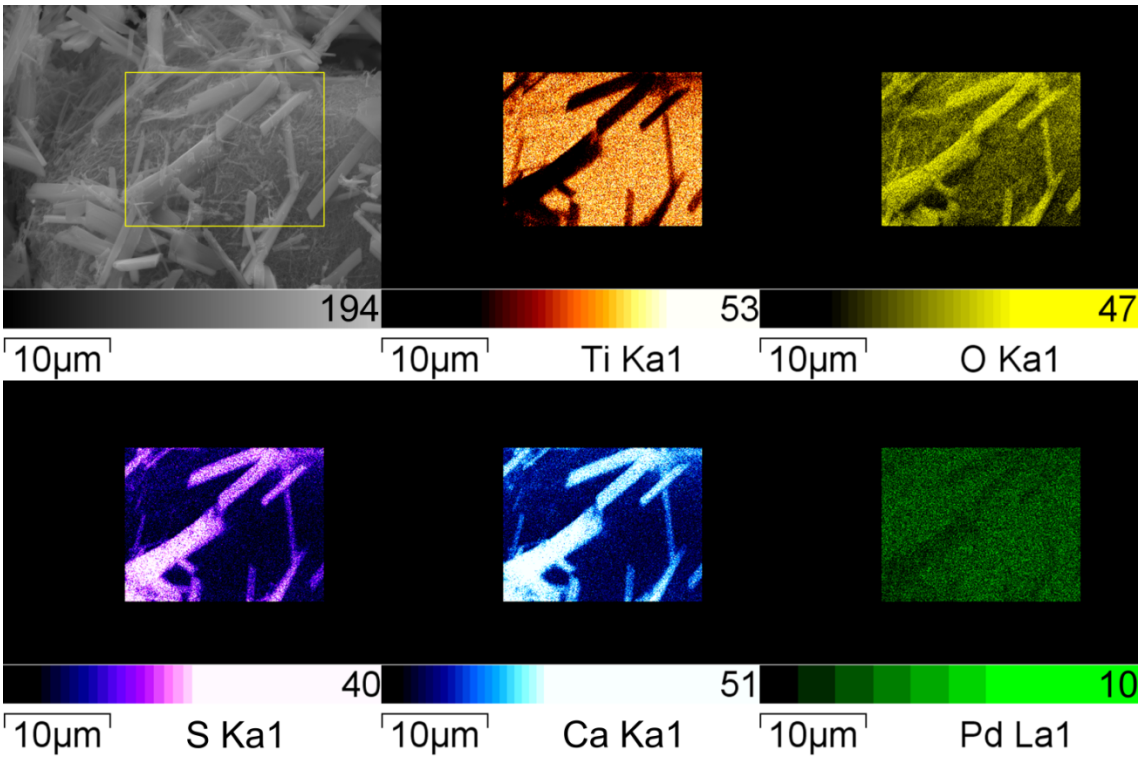


Figure SI-3. EDX map of GTCPdOR composite.

| ***Gypsum*** | ***Calcium-sulfate 01-074-1433 Monoclinic*** | | ***TCPdOR*** | ***Anatase 01-089-4921 Body-centered tetragonal*** | | ***β-$TiO_2$ 00-046-1238 Base-centered monoclinic*** | |
|---|---|---|---|---|---|---|---|
| ***2θ (deg.)*** | ***2θ (deg.)*** | ***hkl*** | ***2θ (deg.)*** | ***2θ (deg.)*** | ***hkl*** | ***2θ (deg.)*** | ***hkl*** |
| 20.90 | 20.731 | -1 2 1 | 24.90 | | | 24.931 | 1 1 0 |
| 23.60 | 23.388 | 0 4 0 | 28.92 | | | 28.600 | 0 0 2 |
| 29.30 | 29.117 | -1 4 1 | 29.79 | | | 29.702 | -4 0 1 |
| | 31.090 | 1 2 1 | | | | 29.938 | 1 1 1 |
| 31.15 | 31.163 | 0 0 2 | 25.45 | 25.356 | 1 0 1 | | |
| 32.25 | 32.074 | -2 1 1 | 37.15 | 37.014 | 1 0 3 | | |
| 33.55 | 33.368 | 0 2 2/0 5 1 | 38.00 | 37.847 | 0 0 4 | | |
| | 35.936 | 2 0 0 | 38.80 | 38.644 | 1 1 2 | | |
| 40.85 | 40.656 | -1 5 2 | 43.80 | | | 43.492 | 0 0 3 |
| | 43.322 | 2 4 0 | 44.45 | | | 44.498 | 2 2 3 |
| 43.80 | 43.486 | -1 2 3 | 48.20 | 48.145 | 2 2 1 | | |
| 43.85 | 43.604 | 1 1 2 | 54.10 | 53.974 | 1 0 5 | | |
| 48.25 | 47.868 | 0 6 2/0 1 3 | 55.25 | 55.186 | 2 1 1 | | |
| 48.60 | 48.400 | -1 4 3 | | | | 57.302 | 0 2 2 |
| 50.50 | 50.334 | -2 6 2 | | | | | |

Table SI-1. X-ray diffraction reflections of gypsum and palladium decorated titania nanofibers compared to monoclinic calcium-sulfate (01-074-1433), body-centered tetragonal anatase (01-089-4921) and base-centered monoclinic β-$TiO_2$ (00-046-1238), respectively.

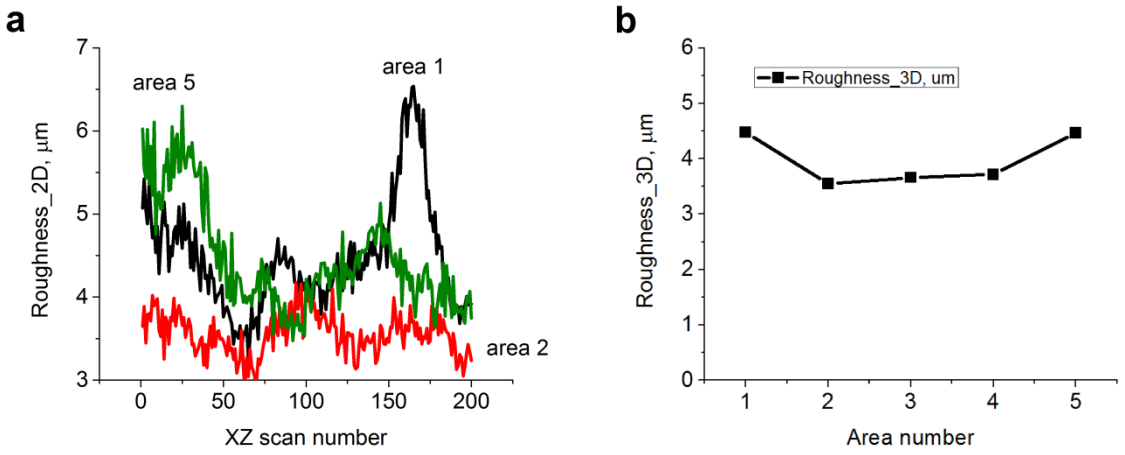


Figure SI-4. Two- (a) and three- (b) dimensional roughness of the sample GTCNPdOR 3:1 on the XZ scan number. Single XZ scan corresponds to 1x0.35 sq. mm. 200 XZ scans covers 1 mm distance. Thus, single area XYZ covers 1x1x0.35 cu. mm.

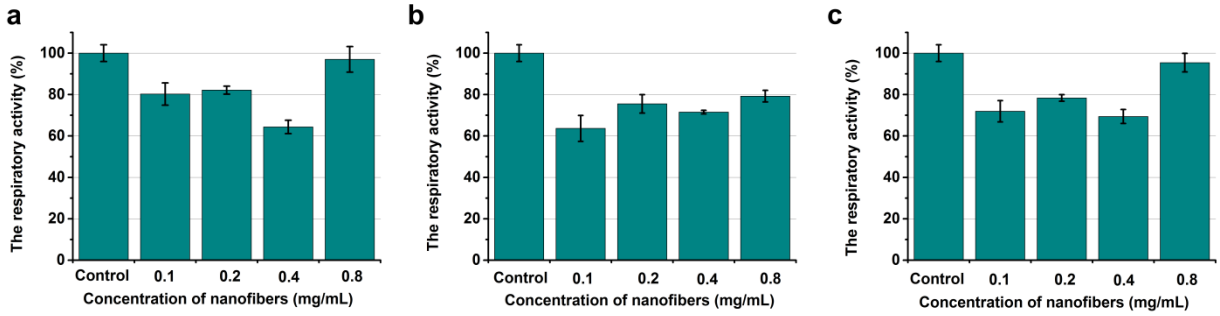


Figure SI-5. Cell viability revealed by MTT assay for TCN (a), TCPdOR (b), and TCNPdOR (c).