Fibrin Clot Degradation by Polyaniline-Coated AuNP Using Laser Photolysis

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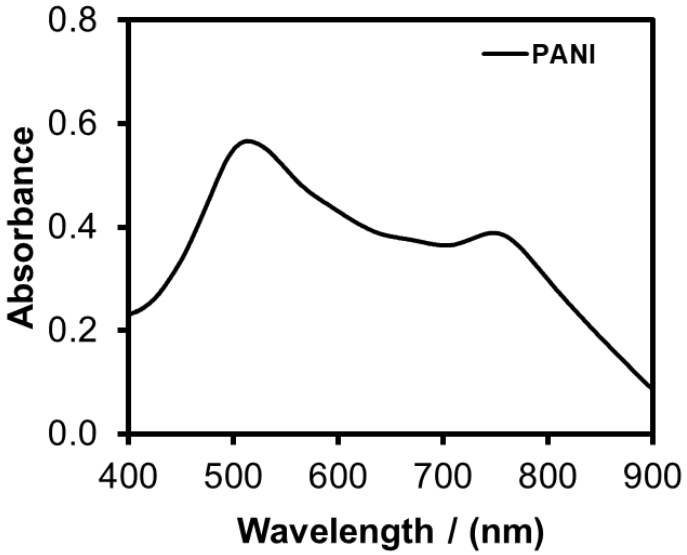

Figure S1. UV-Vis absorption of PANI.

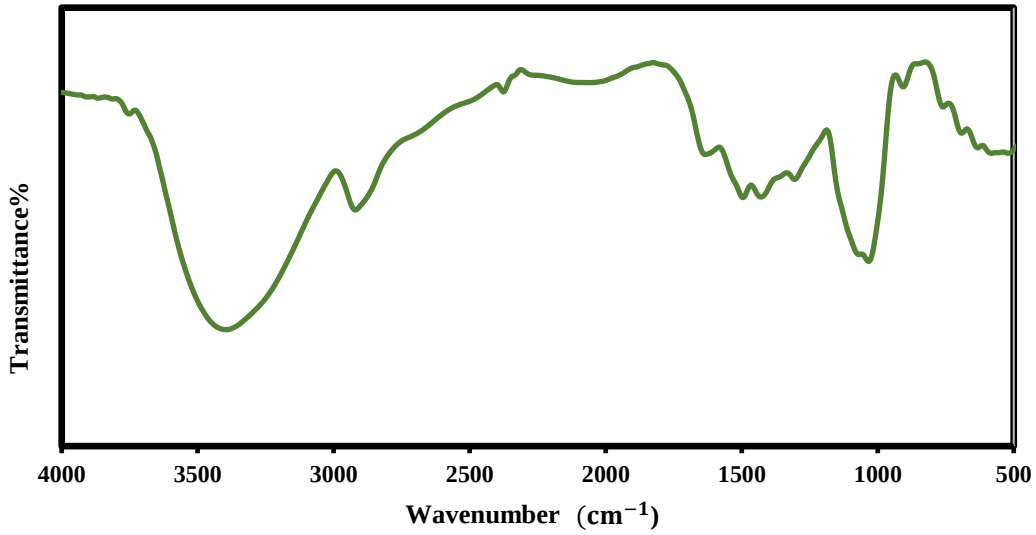

Figure S2. The FT-IR spectra of PANI shell.

Type	Function group	Absorption frequency (cm^{-1})
PANI shell	N—H	3394.72
	C—H (stretching)	2924.09
	C=C (guinoid ring)	1635.64
	C=C (benzenoid ring)	1496.76
	C—N	1303.88

Statistical analysis

Image J software was used to process the SEM microscopy image of the fibrin network to extract and measure the gaps in three different SEM images for each sample and calculate the average area for them. By following an established protocol, the threshold feature in the Image J software was used to determine the appropriate threshold for the SEM image,[1–4] and gaps smaller than 1 nm were excluded. All SEM micrographs used in the statistical analysis of the sample at ×15,000 magnifications.

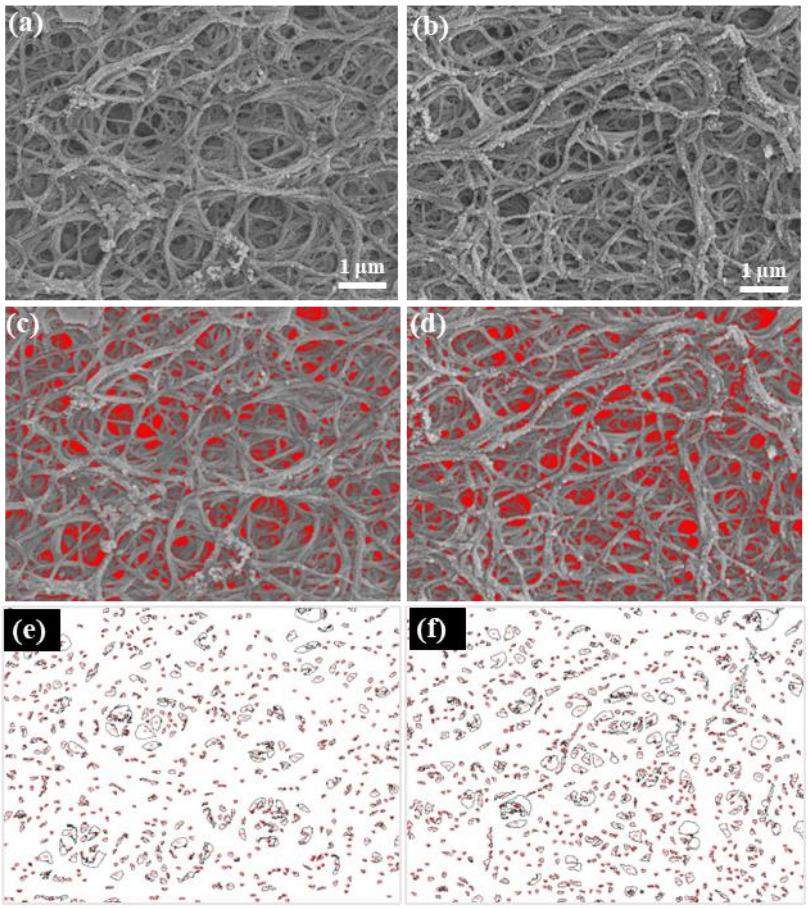

Figure S3. Gap analysis in two different SEM images of the fibrin clot network by ImageJ software after adding AuNPs in the dark (sample control). (a, b) the SEM images; (c, d) the threshold images reconstructed from the SEM images; and (e, f) represent the drawing gap area of each image above, respectively.

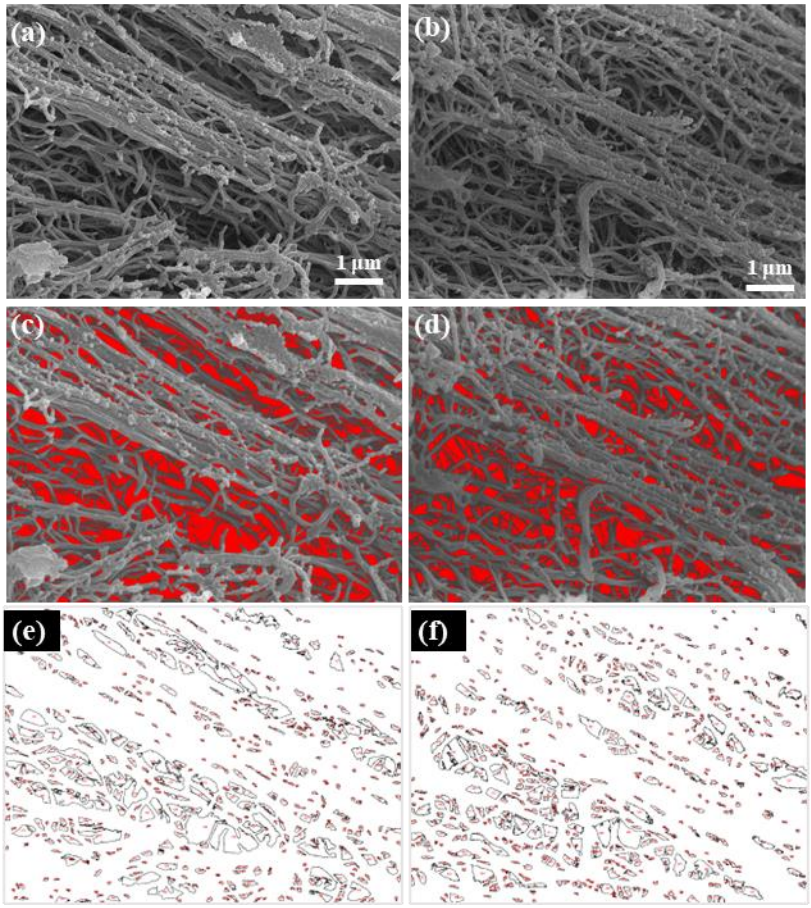

Figure S4. Gap analysis in two different SEM images of the fibrin clot network by ImageJ software after adding AuNPs under photolysis. (a, b) the SEM images; (c, d) the threshold images reconstructed from the SEM images; and (e, f) represent the drawing gap area of each image above, respectively.

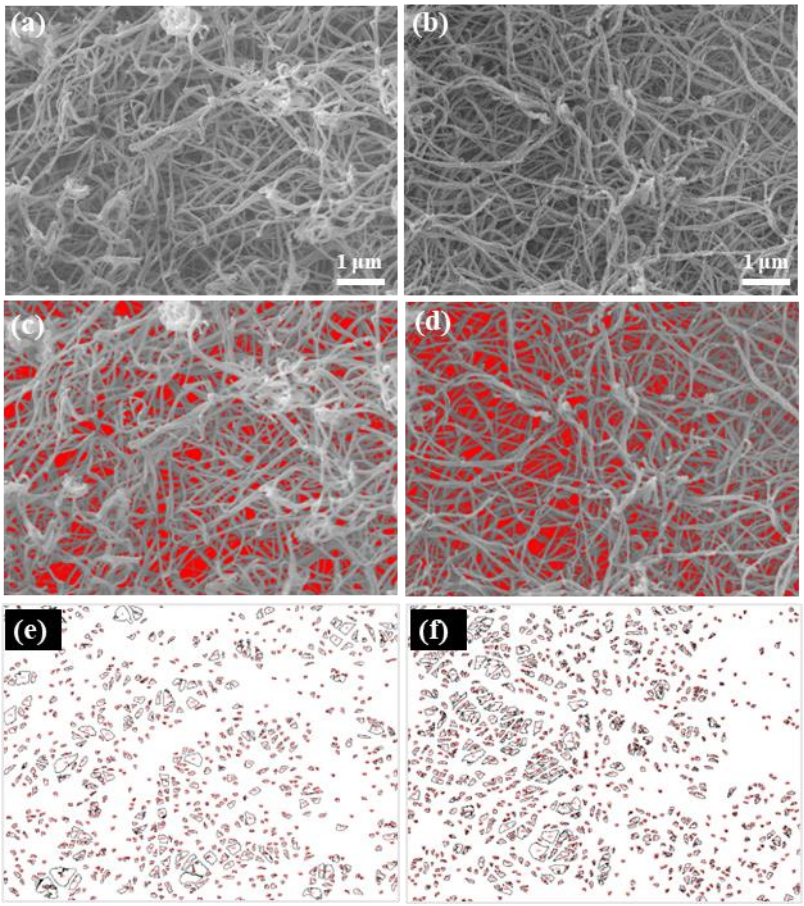

Figure S5. Gap analysis in two different SEM images of the fibrin clot network by ImageJ software after adding AuNPs@PANI in the dark (sample control). (a, b) the SEM images; (c and d) the threshold images reconstructed from the SEM images; and (e, f) represent the drawing gap area of each image above, respectively.

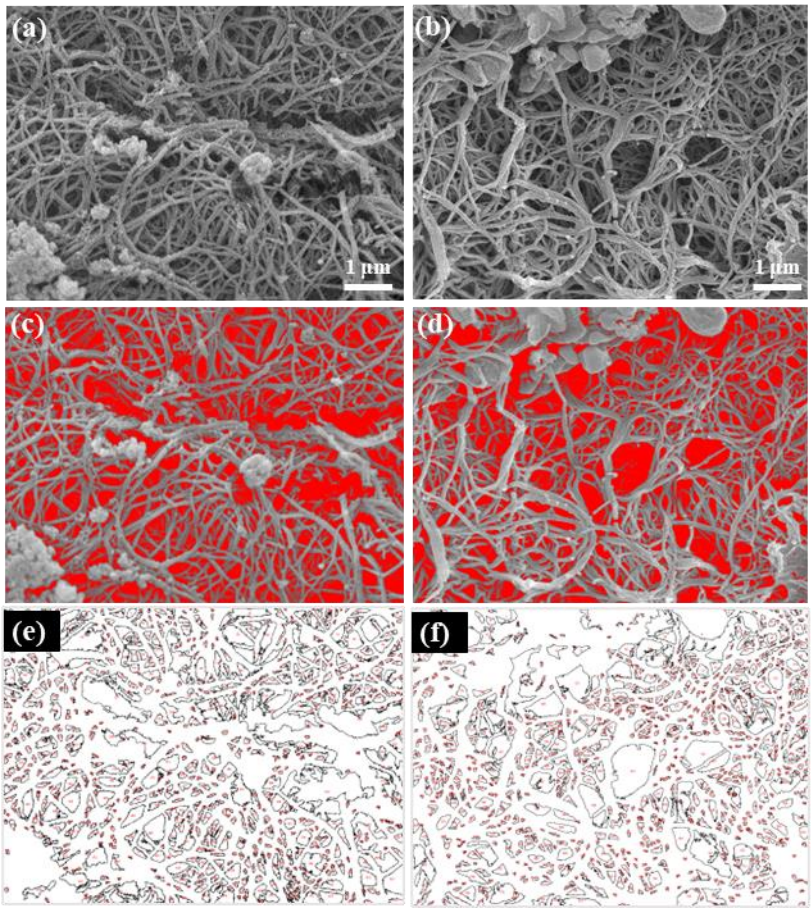

Figure S6. Gap analysis in two different SEM images of the fibrin clot network by ImageJ software after adding AuNPs@PANI under photolysis. (a, b) the SEM images; (c, d) the threshold images reconstructed from the SEM images; and (e, f) represent the drawing gap area of each image above, respectively.

Table S1. The gaps area calculation of sample at three different positions.

Sample	Image	Total area (μm^2)	Total gap (μm^2)			Gap > 100 (nm^2)	
			Count	Area	Area %	Count	Area %
AuNPs (Dark)	**Figure 9. (c)**	47.721	663	5.676	11.894	3	1.717
	Figure S1. (e)	47.720	653	3.999	8.380	0	0
	Figure S1. (f)	47.201	739	5.161	10.934	2	0.510
	Average area % =				10.402	**Average area % =**	1.113
AuNPs (Photolysis)	**Figure 9. (f)**	47.728	677	6.776	14.197	8	2.298
	Figure S2. (e)	47.277	514	7.615	16.107	15	4.695
	Figure S2. (f)	47.306	577	6.078	12.848	3	1.063
	Average area % =				14.384	**Average area % =**	2.595
AuNPs@PANI (Dark)	**Figure 10. (c)**	47.848	833	4.838	10.111	0	0
	Figure S3. (e)	47.770	749	5.057	10.586	2	0.529
	Figure S3. (f)	47.853	884	5.227	10.923	0	0
	Average area % =				10.54	**Average area % =**	0.529
AuNPs@PANI (Photolysis)	**Figure 10. (f)**	47.726	658	14.315	29.994	9	14.742
	Figure S4. (e)	46.999	697	14.725	31.330	20	10.445
	Figure S4. (f)	47.178	821	13.838	29.331	26	11.805
	Average area % =				30.218	**Average area % =**	12.330

References:

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