Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

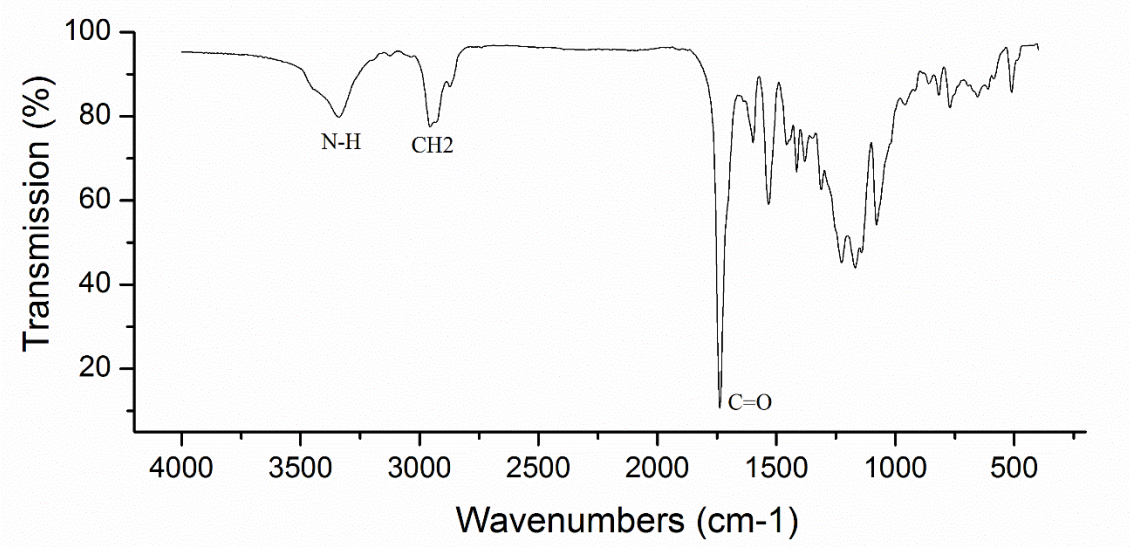

Figure S1. FT-IR of polyurethanes. IR spectrum was required by Nexus 870 FT-IR (Nicolet, USA).

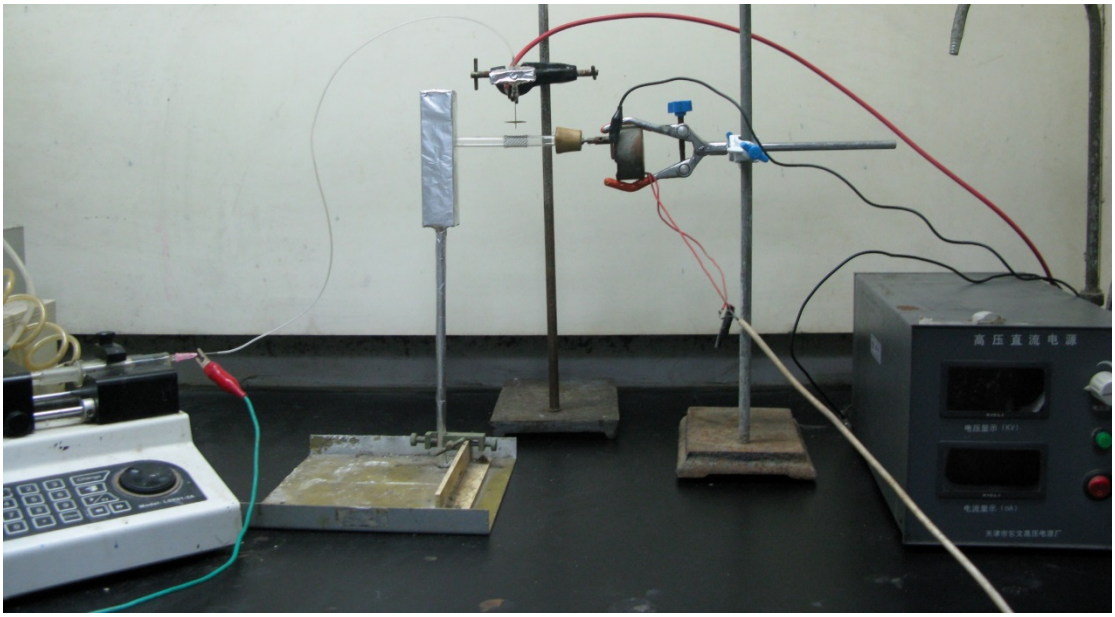

Figure S2. Self-designed electrospray system. Detailed illustration of component was explained in Figure 1.

Table S1. Uniformity of paclitaxel-coating prepared by electrospray. (n=3) The loading percentage is calculated by drug amount dividing polyurethane weight. For all products, theoretical polymer weight was 30mg.

Theoretical Loading (wt. %)	**3%**	**5%**	**10%**	**20%**
Actual Results (wt. %)	3.05±0.05%	4.78±0.21%	9.97±0.17%	19.40±0.68%

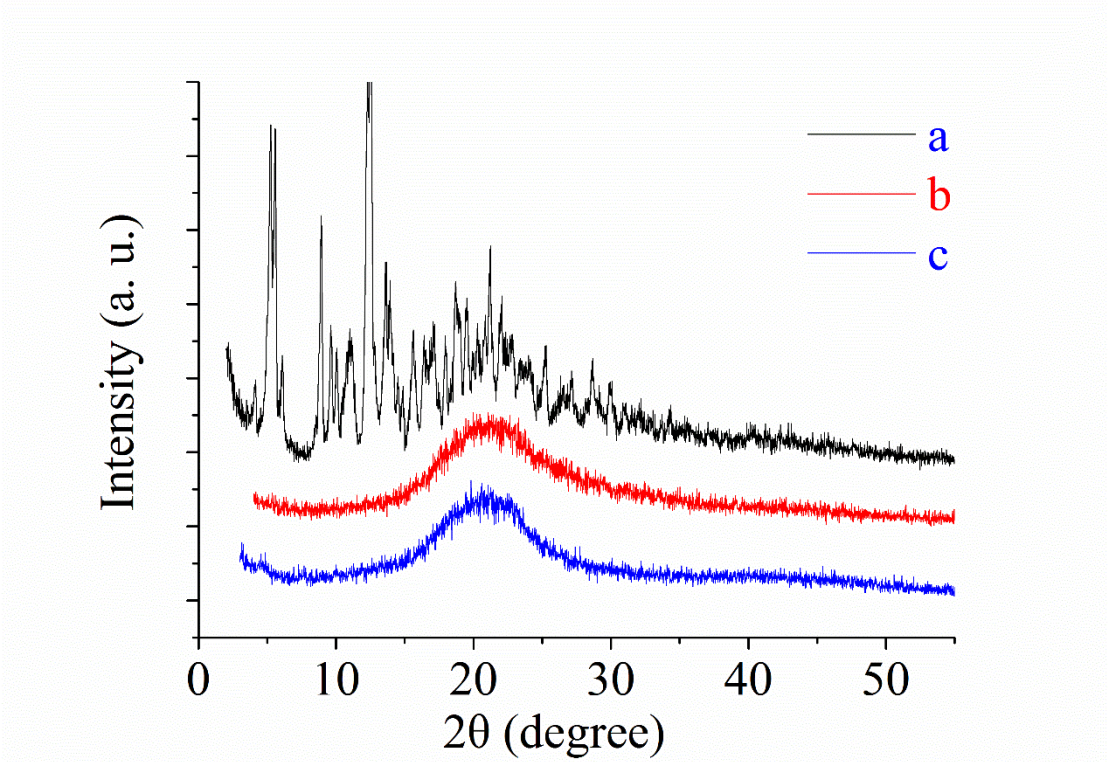

Figure S3. X-ray diffraction patterns of paclitaxel (a), polyurethane (b), 10% drug-loading film (c). Paclitaxel was dispersed in the amorphous state among the film.

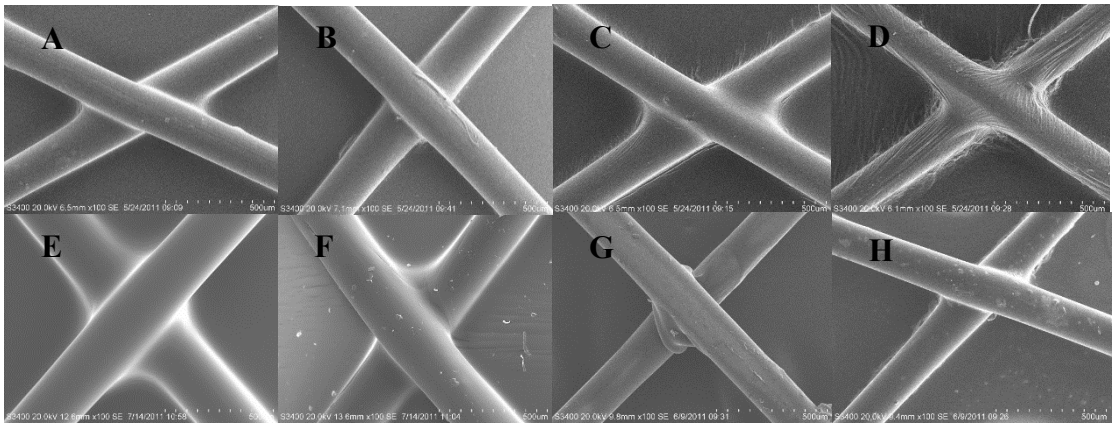

Figure S4. Surface morphologies of different paclitaxel-loading stent (intersection area of struts) before and after drug release (100×): film 30mg-0%, 15mg-10%, 30mg-10%, 30mg-20% respectively before release (A, C, E, G); corresponding results after 5-day release (B, D, F, H).

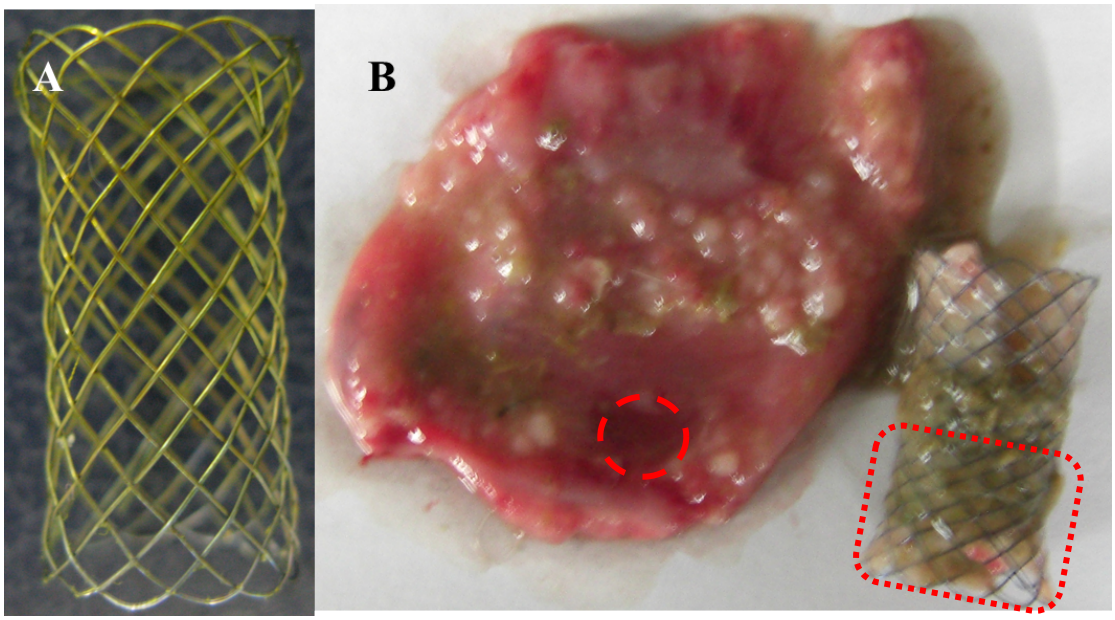

Figure S5. Drug-eluting stent with only coating of struts and the anti-hyperplasia effect *in vivo*. (A) 5mg polyurethane-coating on stent struts. Curcumin (yellow) was used as the indicator to show the performance. (B) The lower section of stent was coated with 5mg PUs-10% paclitaxel on struts (rectangle). After 1 week, the upper bare stent induced serve tissue granulation, while paclitaxel effectively inhibited tissue hyperplasia in the adjacent section. Haemorrhage also occurred (circle).