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Development of electropinning system have a hemispherical collector

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This research project has developed electrospinning system for performance increasing of the system. Operating system was changed from the computer controlled to command on the machine and status of system show on display on LCD screen. Moreover, this research has developed working control programs with Arduino board. Component of electrospinning system are source of voltage, flow rate control system and metal collector which can be synthesis fiber in nano scale. Then, calibration of flow rate can be adjusted by delay value and solution injection time of 10 ml leads to relation between flow rates with delay. The system can adjust flow rate that requirements. The performance test use polyvinylpyrrolidone solution for spinning fiber and analysis characteristic by using scanning electron microscope techniques (SEM).

The improvement of the flow rate has resolution at 0.1 mm/hr. Hence, the electrospinning system can be processed fiber in order nano scale. the relation between flow rate with delay was delay equal 1,255 of divided by the flow rate. The resolutions of flow rate are adjusted at 0.1 ml/hr. The fiber was fabricated from the conditions of 10 kv at distant between the tip of needle and ground collector at 15 cm. Morphology of fibers are smoothness. And, size of fibers are uniformly

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