

Capstone II Demo Schedule

Monday Nov 25

Time	Team	Where	Faculty	Project
8:30am	3	Chen	Buffone	Microfluidic Device to Study Cell Transmigration
9:00	4	Chen	Jaffe	Chitosan-Sulfated Hydrogel
9:30	5	Venture Link*	Kallioniemi	TMS HeadRest Project
10:00	1	Fenster	Chattaraj	Syringe Infuser for MicroBubble Administration
10:30	6	Fenster	Kayaalp	Thermo Modulator: Precision Care System
11:00	2	Fenster	Zhou	Ankle Exoskeleton

Capstone II Demo Guidelines

Prepare an agenda (see attached) for the demo showing what will be presented and by whom.

- a. The demo should illustrate the basic functionality of the product and can be based on test case(s) from your test plan.
- b. The demo should be less than 20 min.

THE NANOFIBER COLLECTOR

Demonstration Agenda

Presented by
Gutenberg Ahimon, Jiogy Grundy, Khadidiatou Guiro, Anna Lai, Duc Tran

Guideline to the Nanofiber Collector in Electrospinning

I Introduction (Gutenberg)

- i) Brief description of The Nanofiber Collector.

II Solution Preparation (Anna)

- i) Selection of polymers.
- ii) Creating a polymer solution.

III Syringe Pump Interface/Motor speed controller (Khady)

- i) Functions available.
- ii) Setting pump rate.
- iii) Setting motor speed.

IV Assembly/Connecting The Nanofiber Collector (Duc)

- i) Illustrate proper assembly.
- ii) Illustrate proper connections.

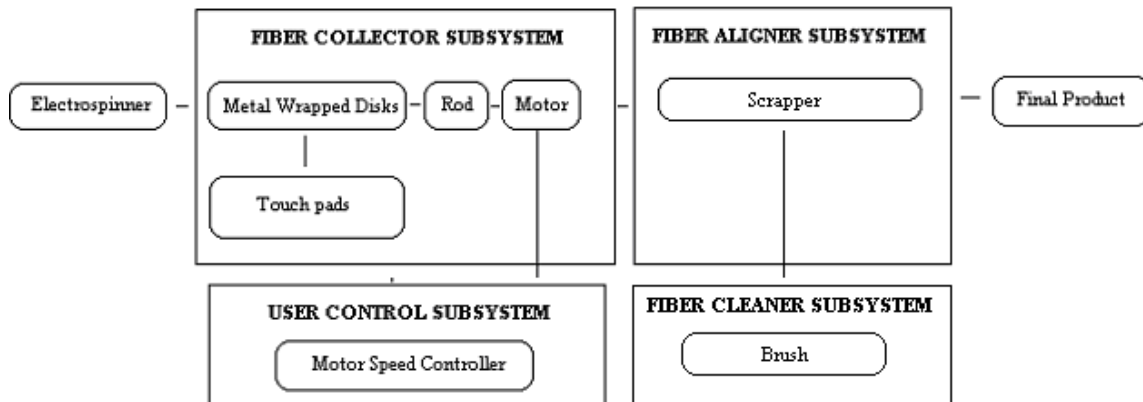
V High Level Requirements/Electrospinning process (Jiogy)

- i) Description of HLRs met.
- ii) Description of the electrospinning process while spinning.

VI Testing/Improvements (Khady)

- i) Description of tests/results.
- ii) Aspects that need improvements.

System Architecture of The Nanofiber Collector



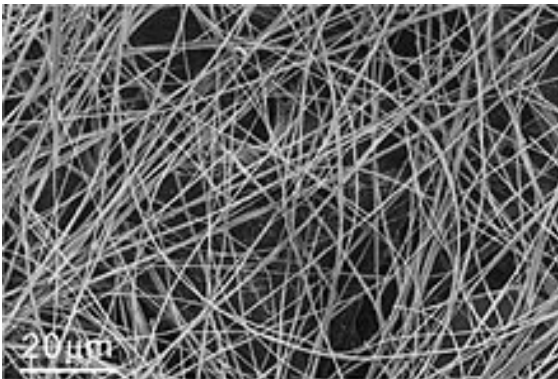
Initial Test Results Illustration

Figures A and B show Scanning Electron Microscopy images of electrospun fibers.

Figure A shows that the fiber alignment of a typical scaffold is in every direction. No regular pattern exists.

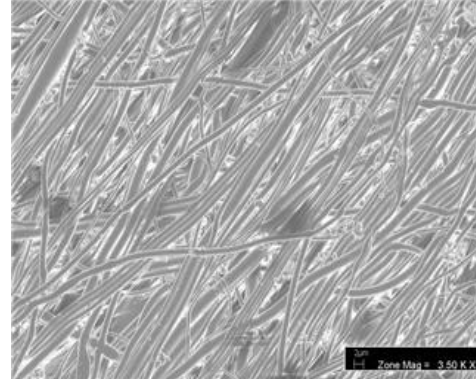
Figure B shows our first test results. The fibers here show a much greater alignment from lower left to upper right than the typical scaffold in Figure A.

Figure A.



SEM Image of Meshed Nanofibers

Figure B.



SEM Image of our 1st Test Results