

Abstract Submitted  
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**Electrospun liquid silk from the gland of *Bombyx mori* silk/  
Green Fluorescent Proteins (GFP)/ poly(ethylene oxide)** SIRINA PUT-  
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AFRL/MLBP, U. OF AKRON COLLABORATION, AFRL/MLPB COLLABORA-  
TION — We have previously demonstrated that Green Fluorescent Protein (GFP)  
molecules can be incorporated into silk films and maintain their nonlinear optical  
properties as well as resist to damage at fluence of 0.1-0.2 J/cm<sup>2</sup> [1]. In the present  
study we report the incorporation of GFP into electrosopun fibers of liquid silk from  
the gland of *B. mori*. PEO was added to the silk/GFP solution to improve the  
processability. The silk/GFP/PEO solutions were successfully elctrospun and the  
morphology of fibers was characterized using optical microscopy, and scanning elec-  
tron microscopy. The resulting fibers exhibit fluorescent under the UV microscope  
in the reflection mode (epifluorescence) indicating incorporation of the GFP. The  
fiber diameters are less than 500 nm. Other characterization techniques are being  
applied. [1]. S. Putthanarat, et.al., “Nonlinear Optical Transmission of Silk/Green  
Fluorescent Protein (GFP) Films,” *Polymer* 2004;45:8451.

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