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Scattering along fiber

- Rayleigh scattering
- Raman scattering
- Brillouin scattering

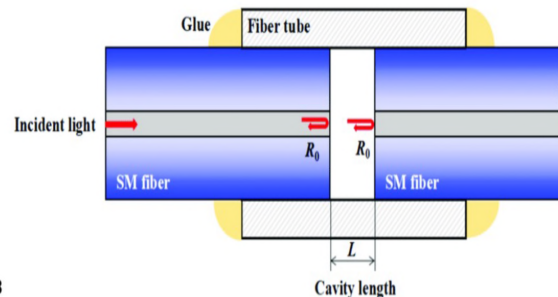
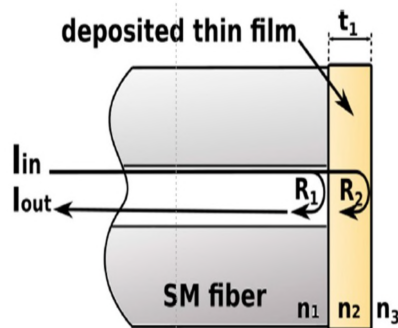
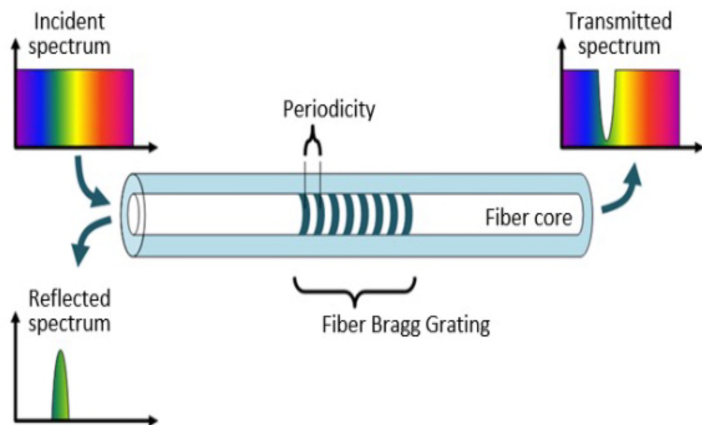
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$$I(\lambda) = I_1(\lambda) + I_2(\lambda) + 2 \sqrt{I_1(\lambda) \cdot I_2(\lambda)} V \cos \left(\frac{2\pi}{\lambda} QRF - \dots \right)$$

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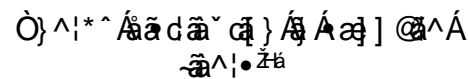
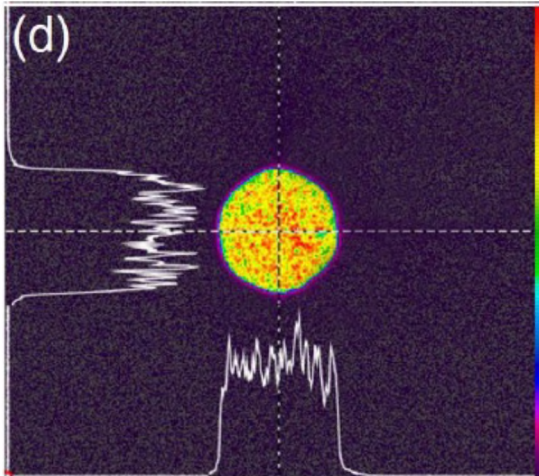
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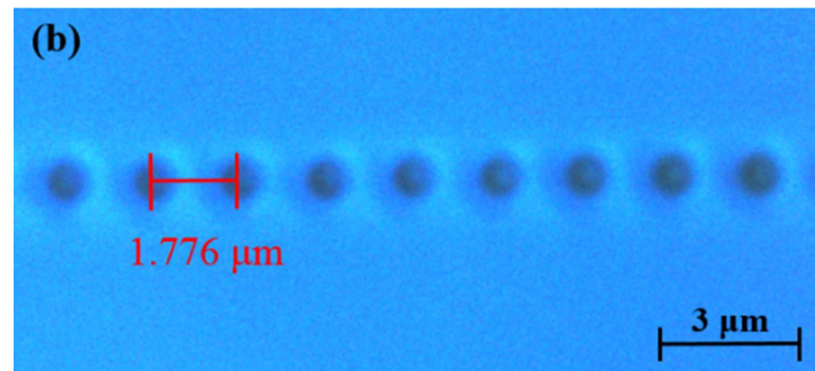
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CPT   **VirginiaTech**
CENTER FOR PHOTONICS TECHNOLOGY *Invent the Future*

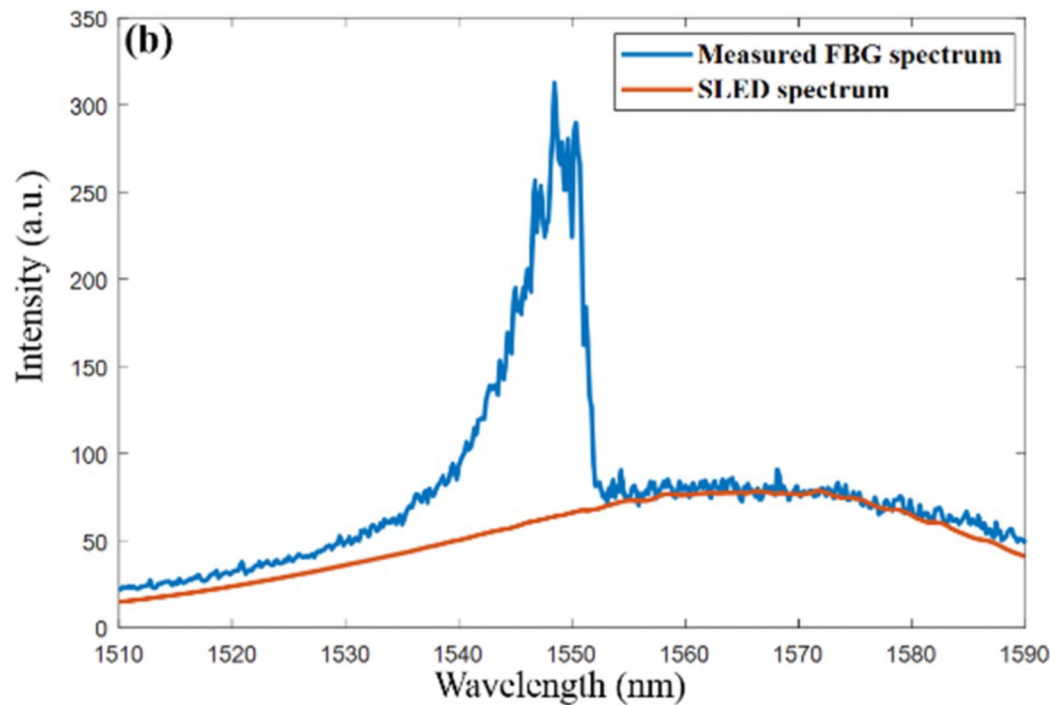
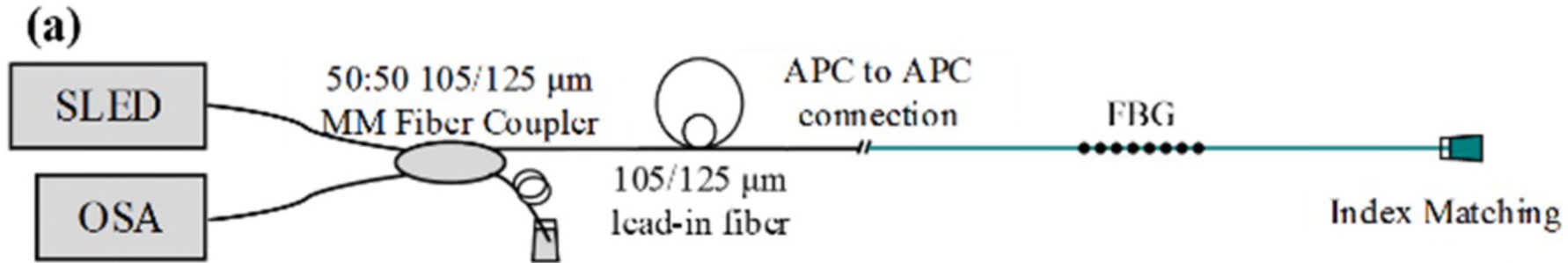
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- (a)** Schematic diagram of the experimental setup. A **Pulse Chain, f_{rep}** is directed through **Index matching oil** onto a **Holder** containing a medium with **$\Lambda = v_s/f_{rep}$** . The setup is mounted on a **5-axis Translation Stage** moving with velocity **v_s** .



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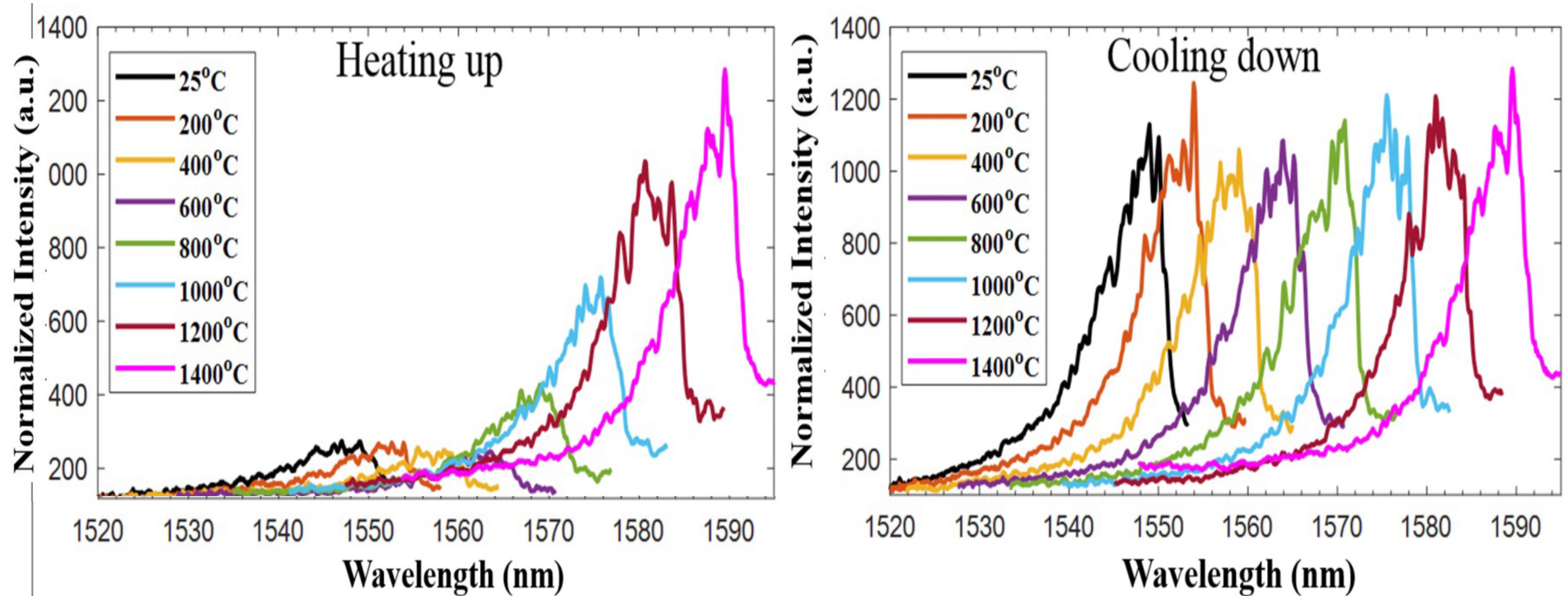
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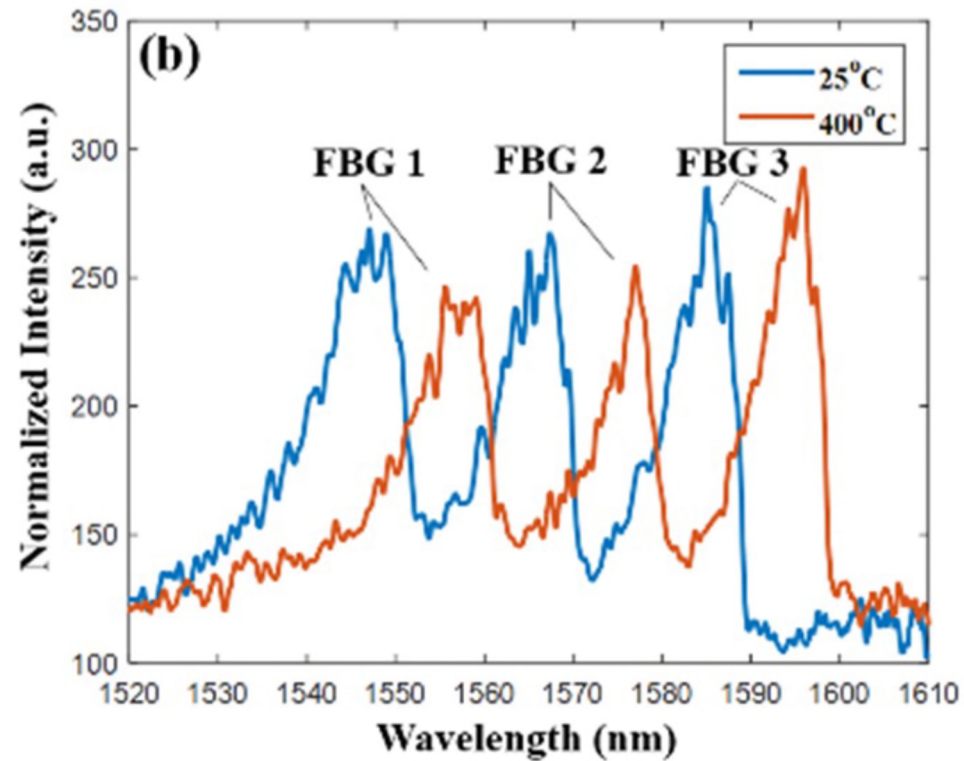
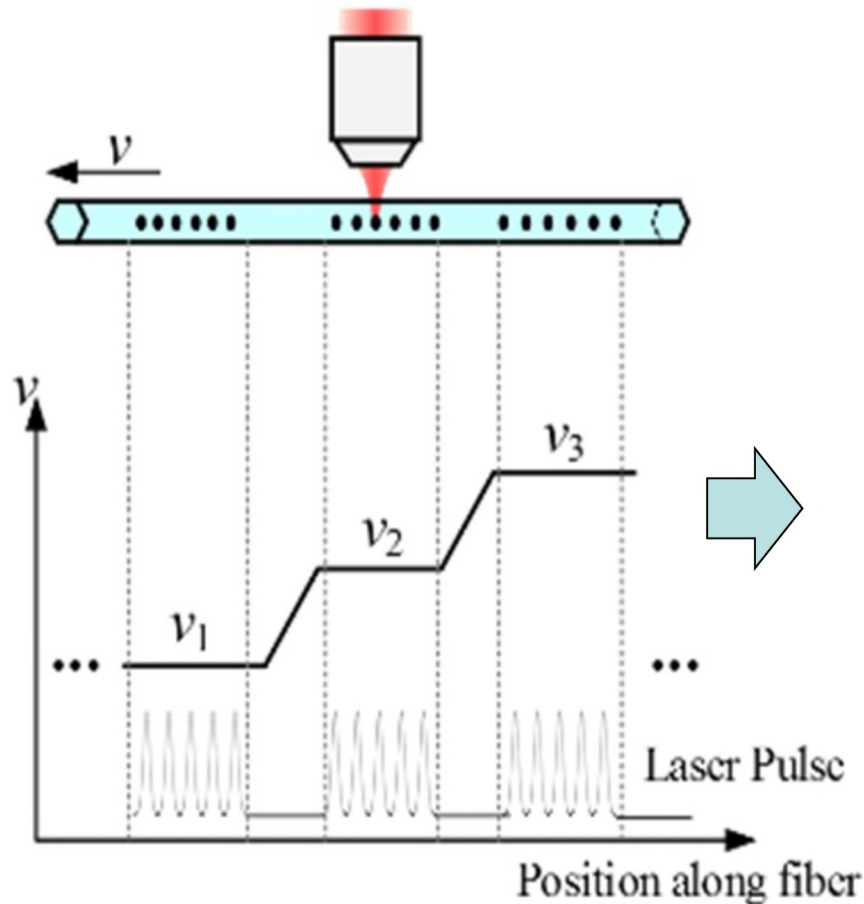


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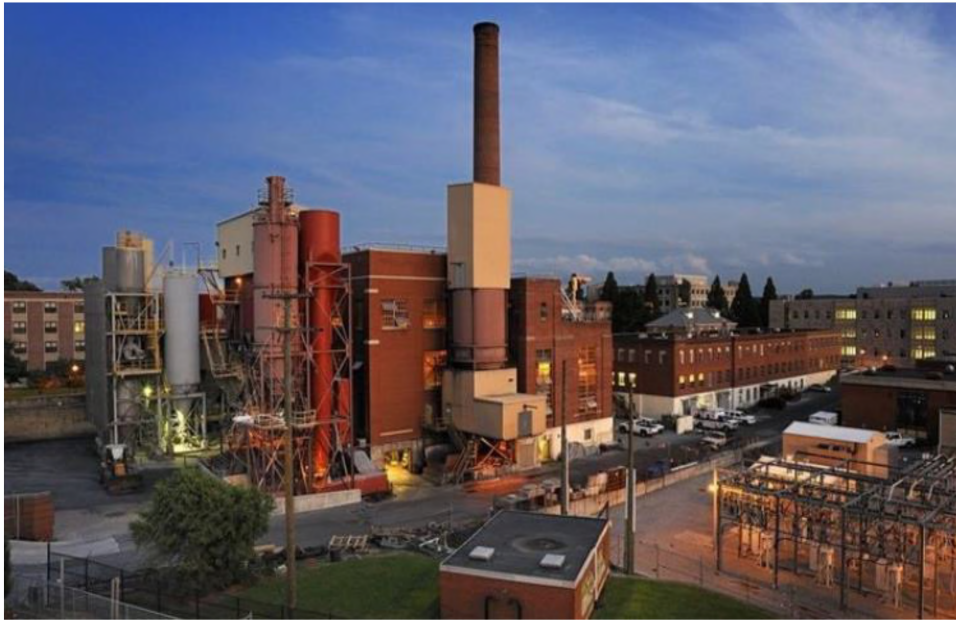
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FBG Sensor Fabrication

Wavelength Multiplexed FBG Array

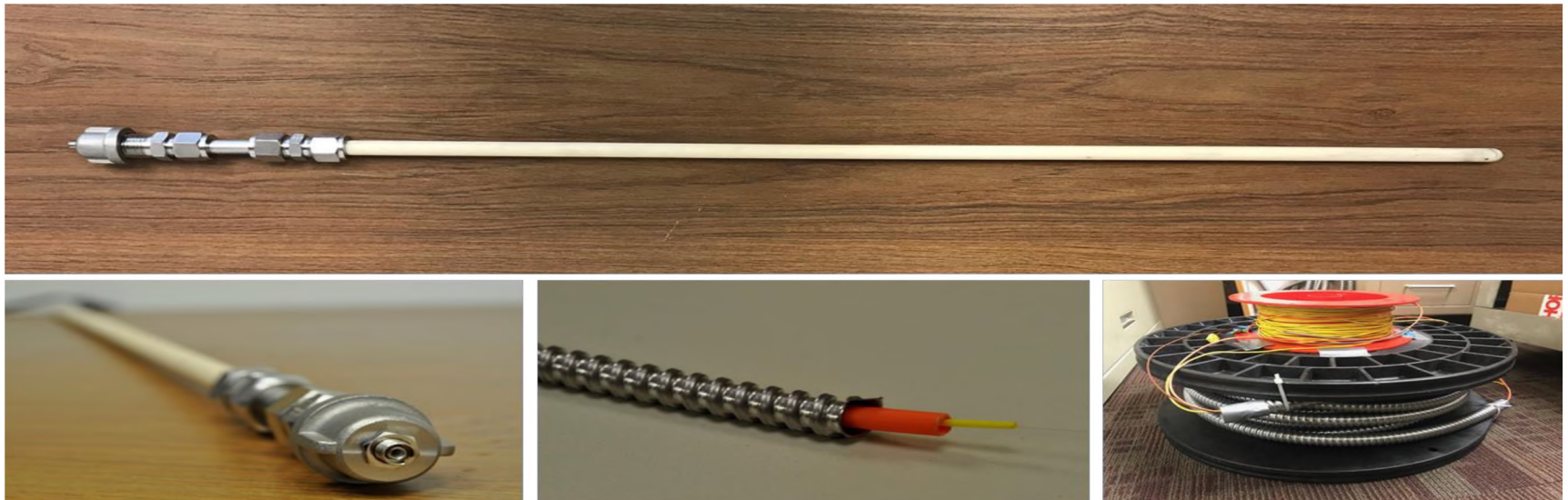
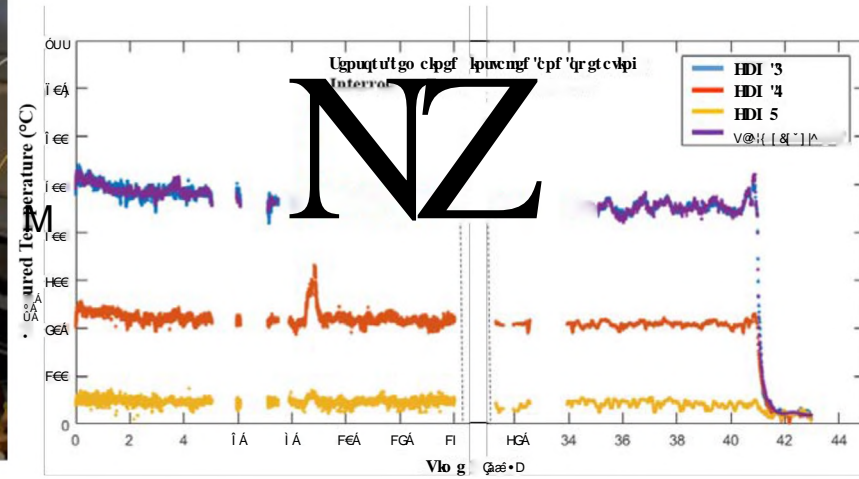
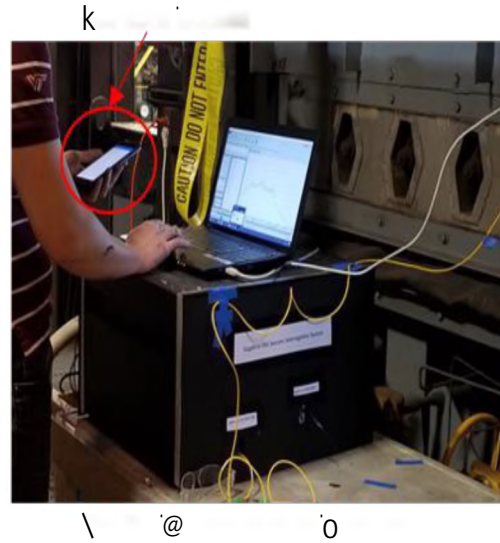
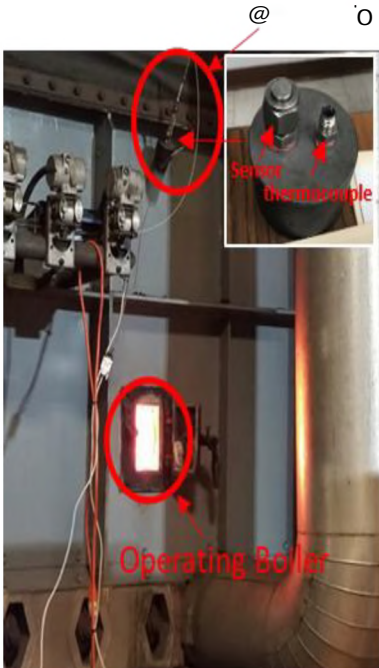


Sapphire Fiber Bragg Grating Field Testing

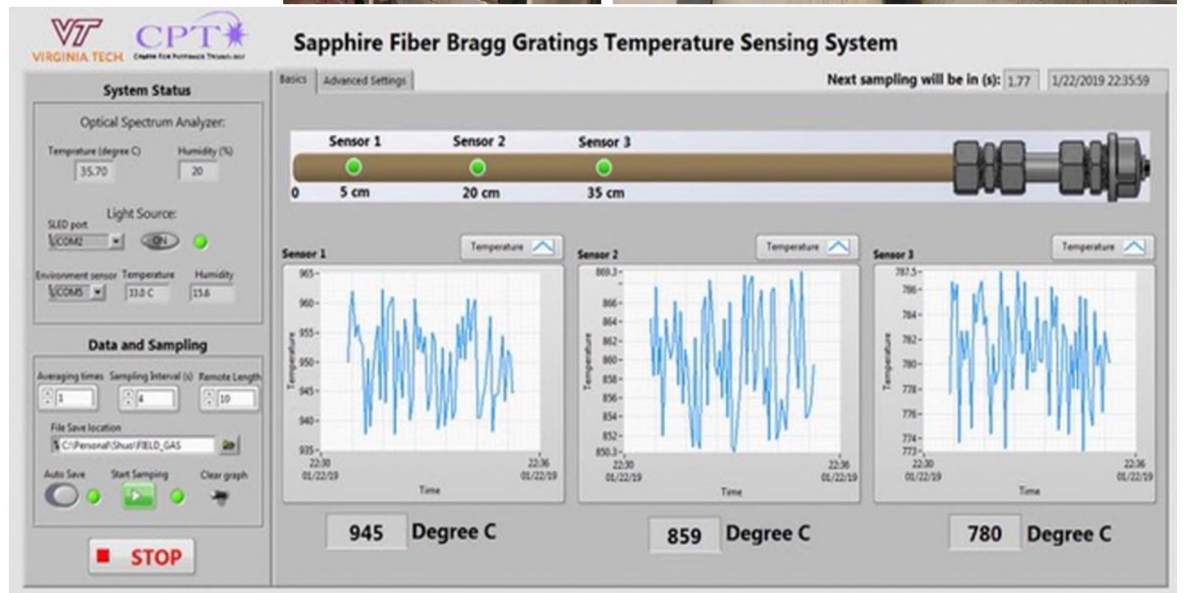


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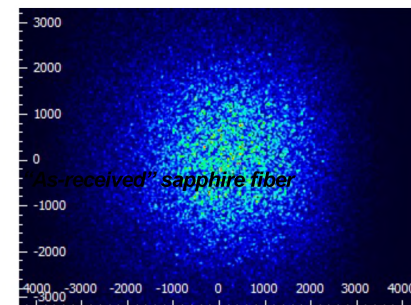
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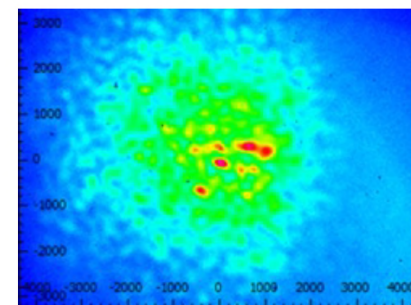
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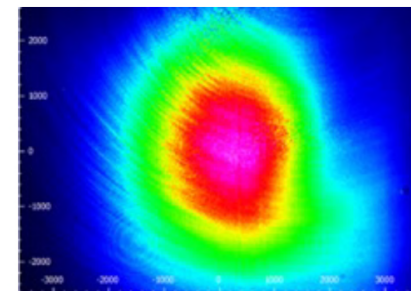


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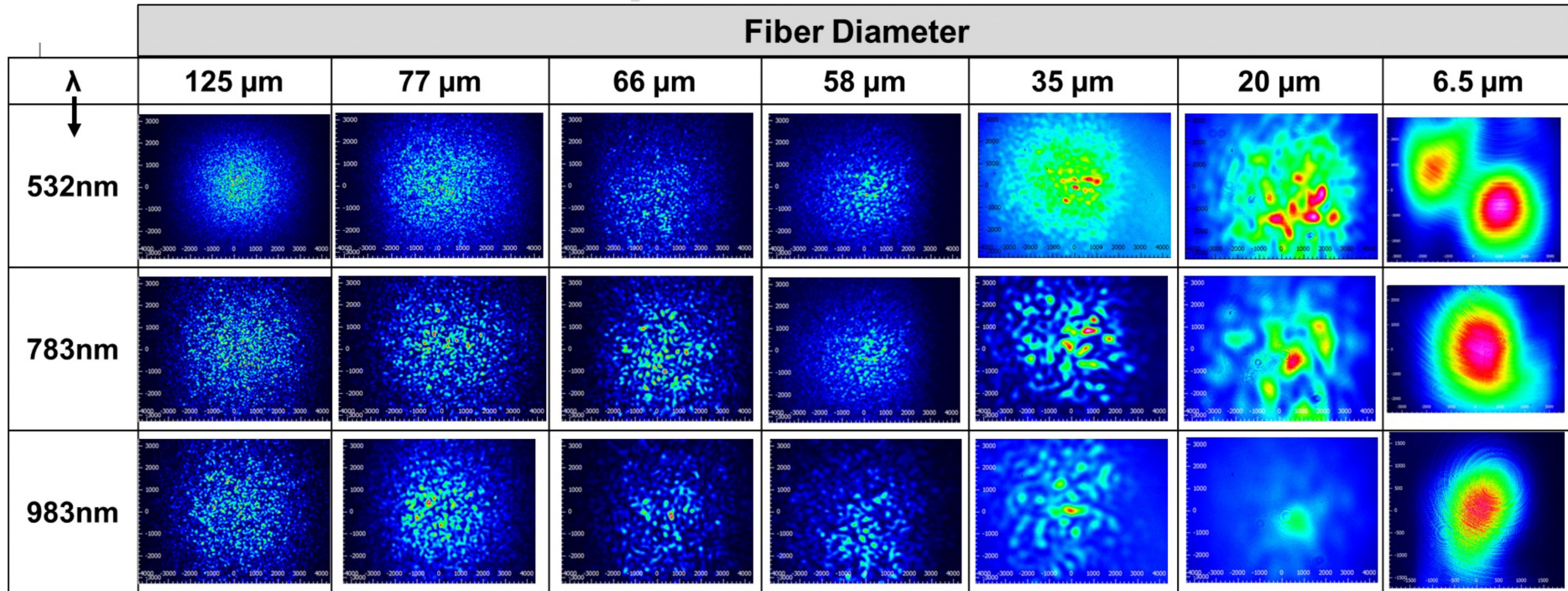


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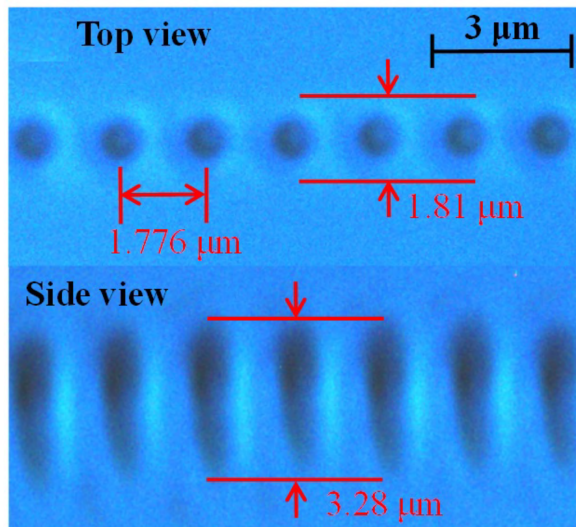
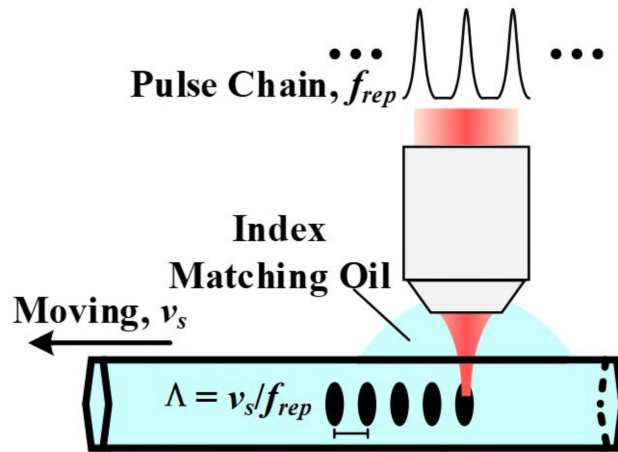


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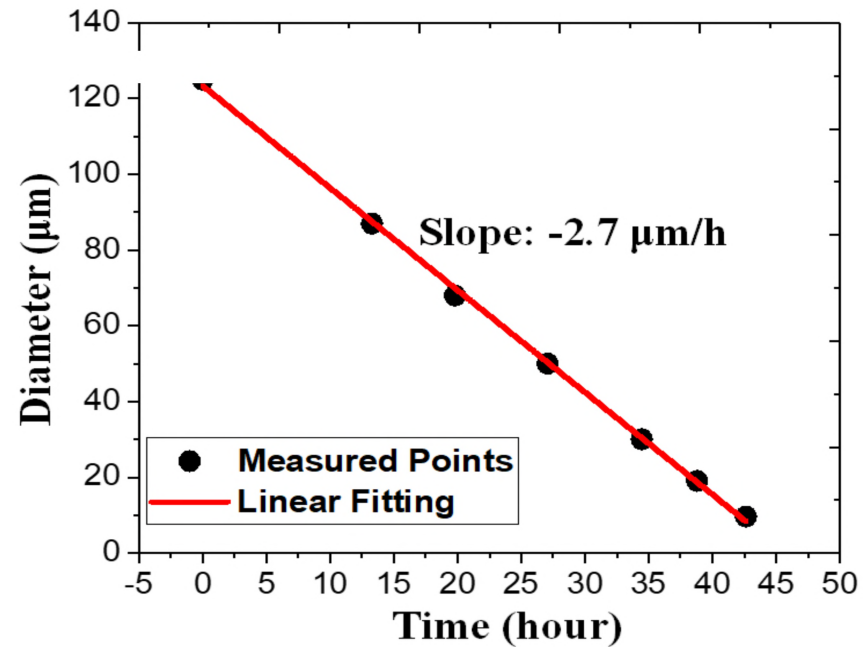
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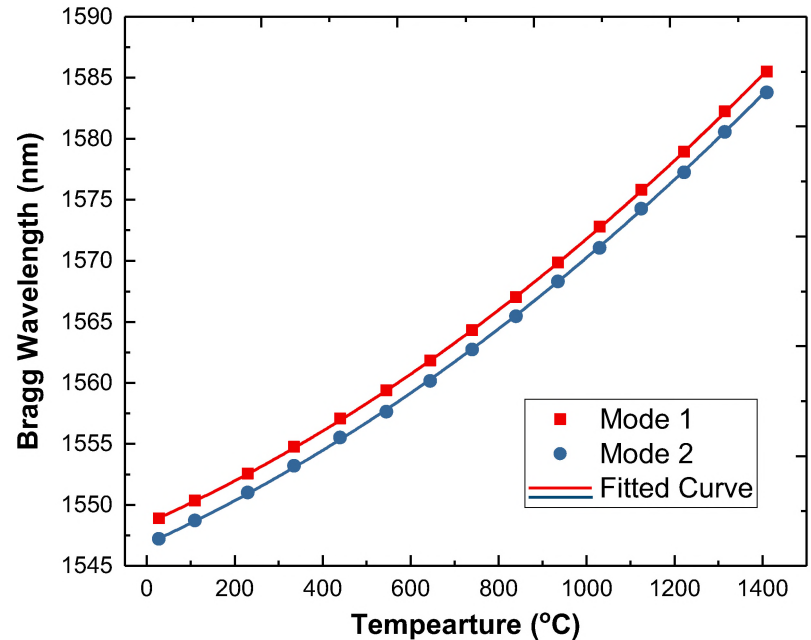
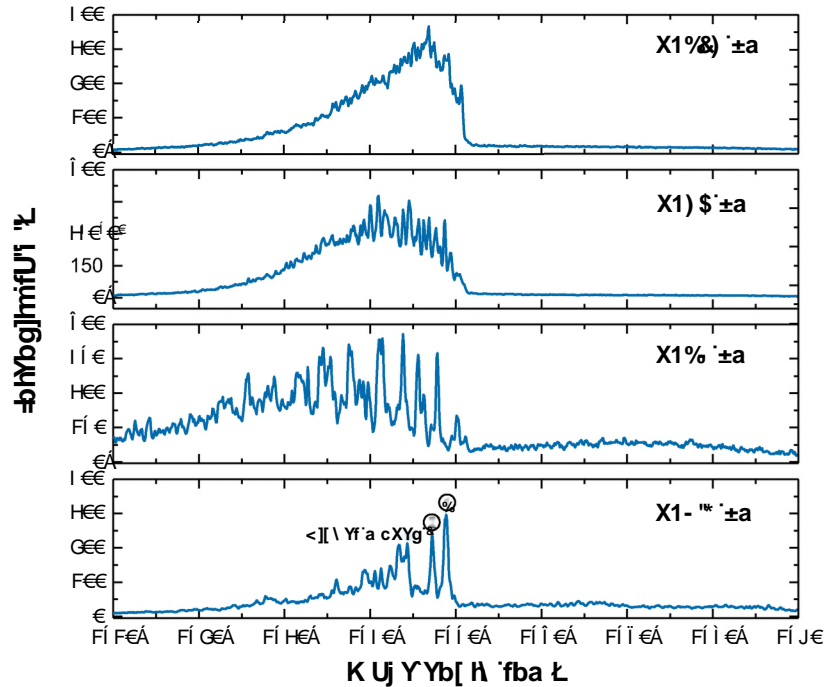
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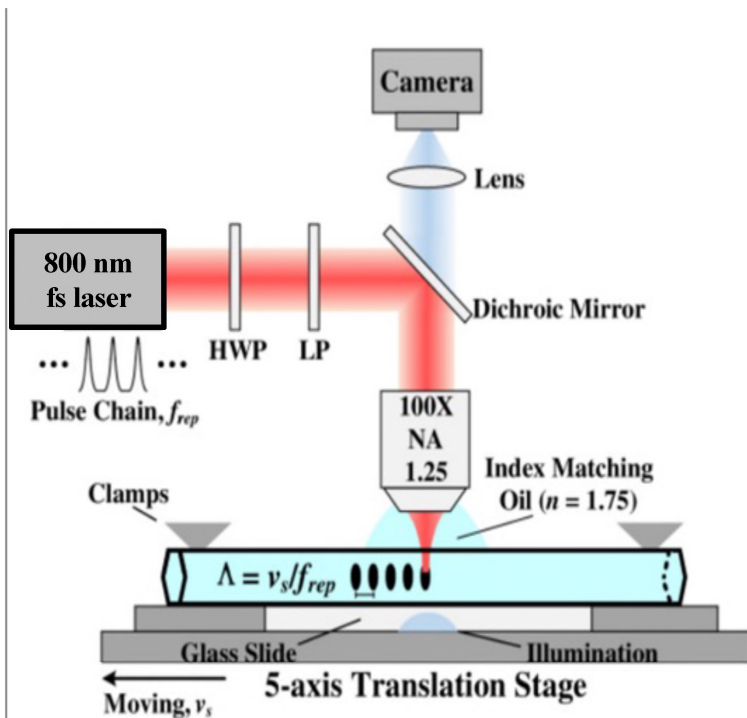
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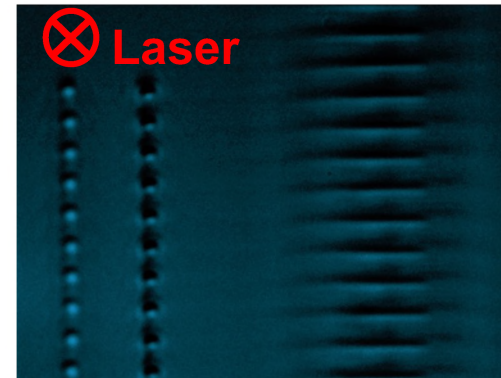
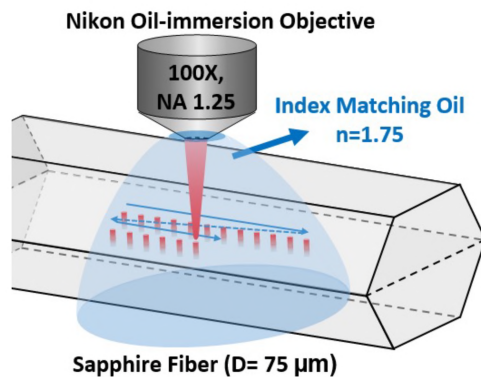
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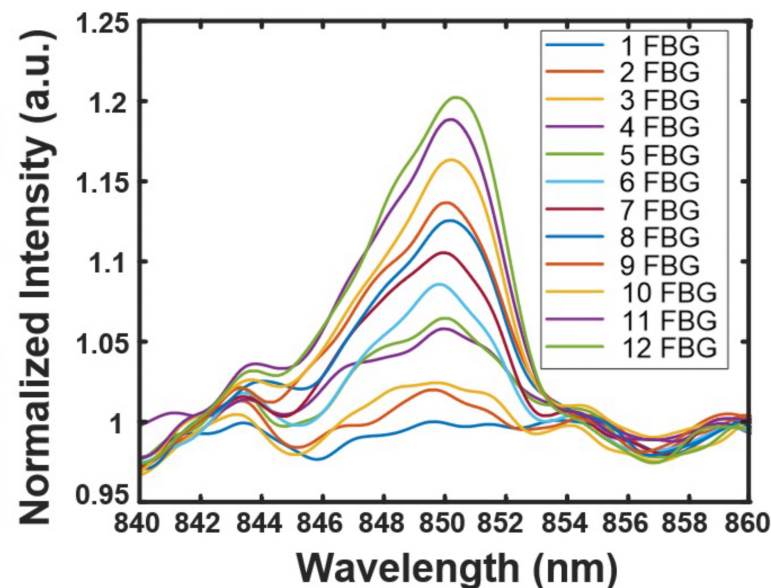
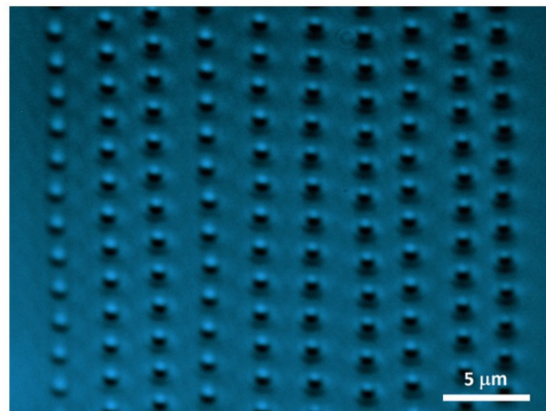
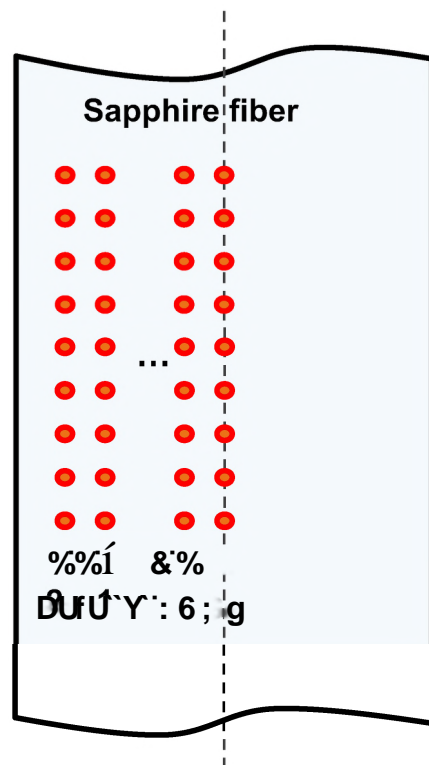
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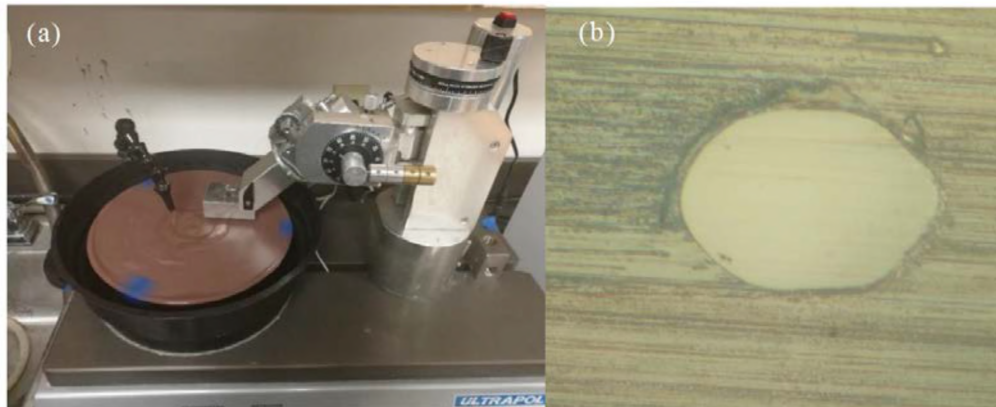
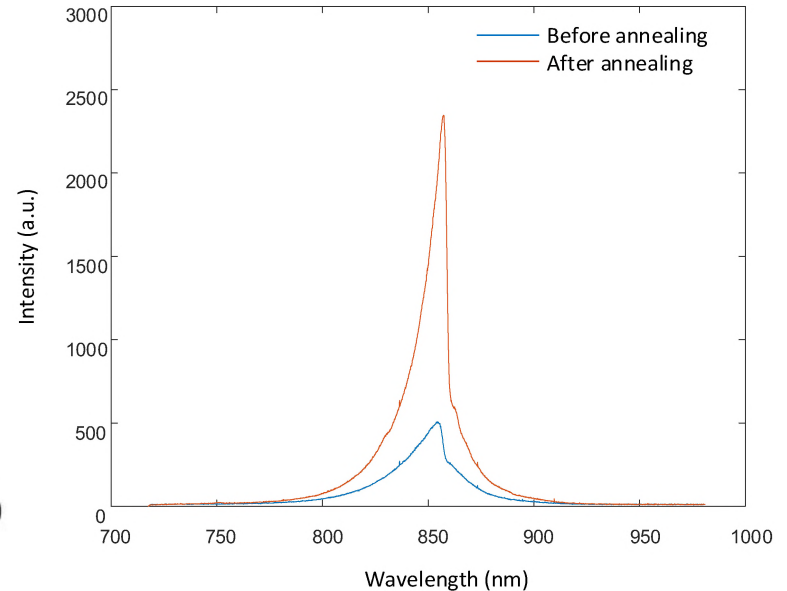
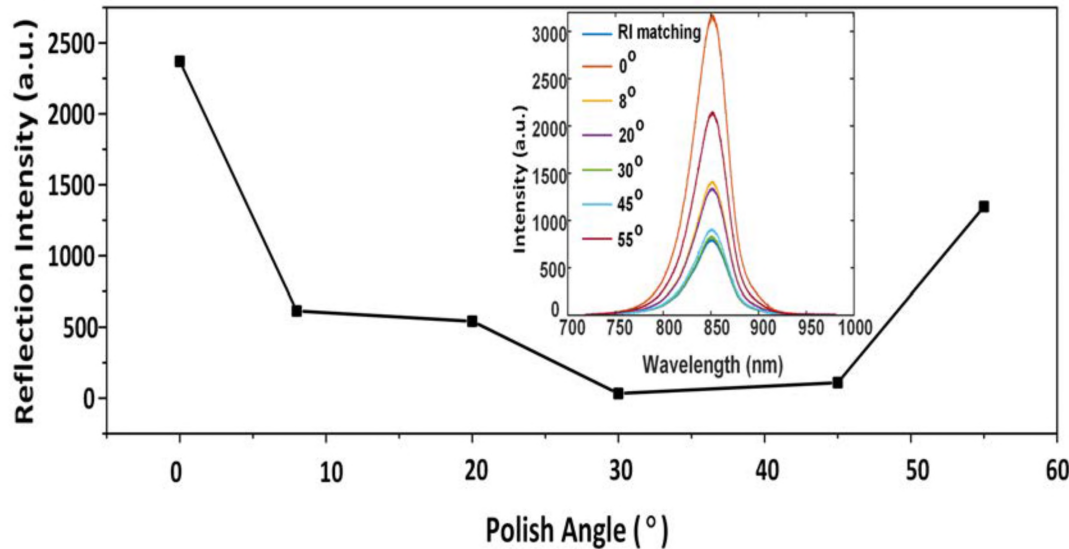
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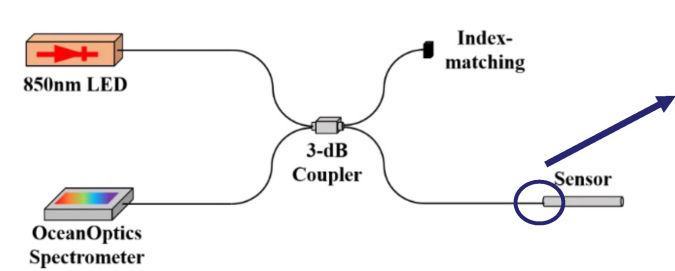
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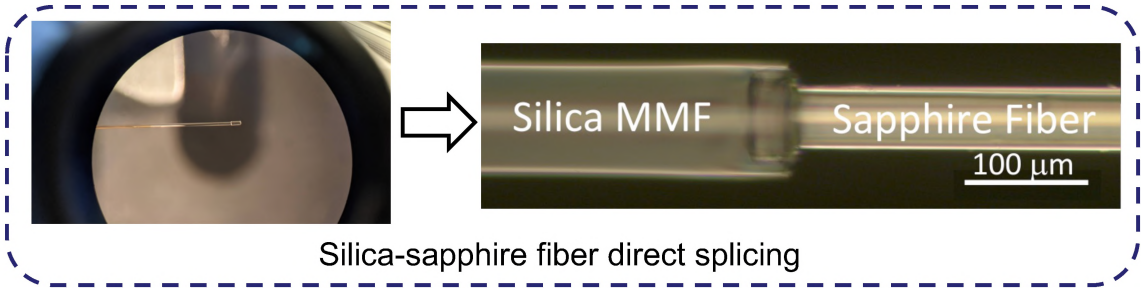
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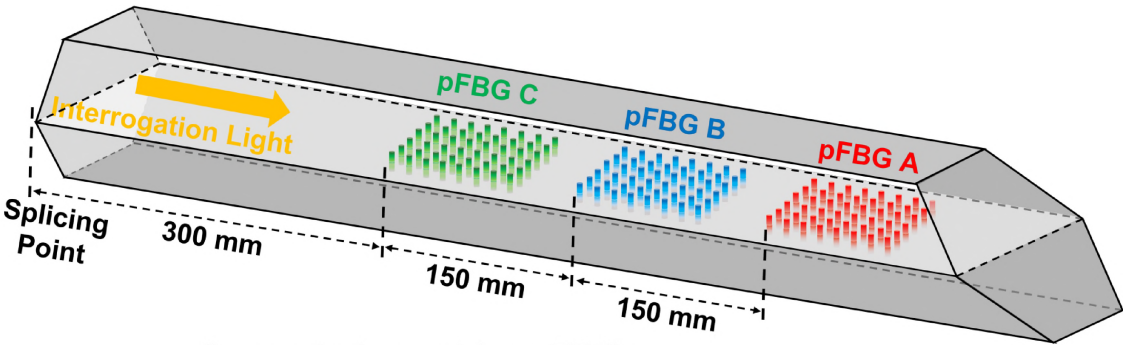
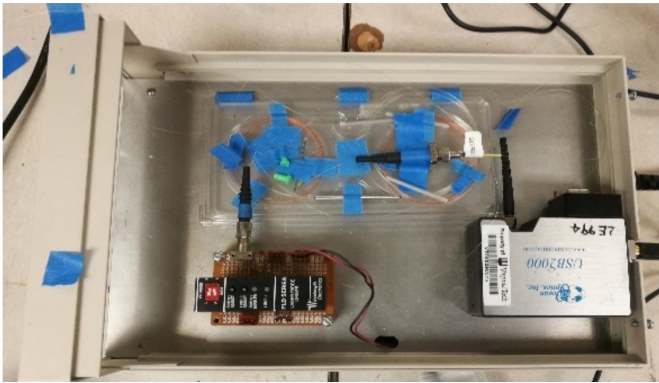
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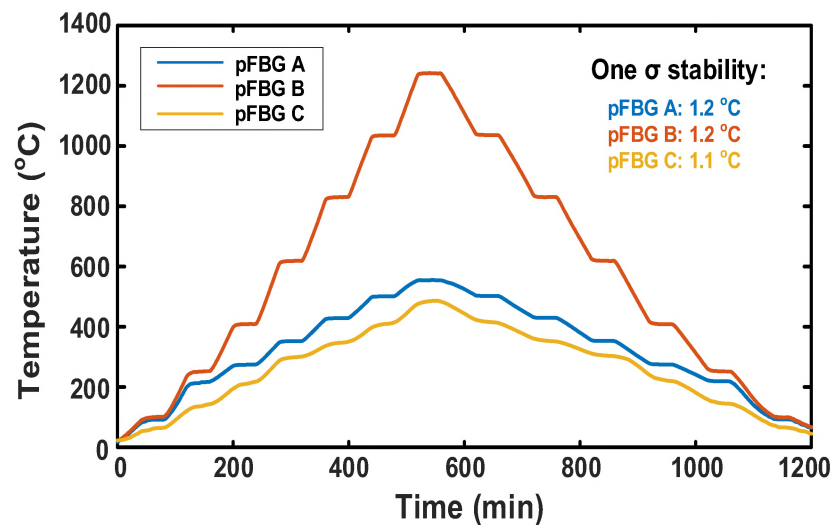
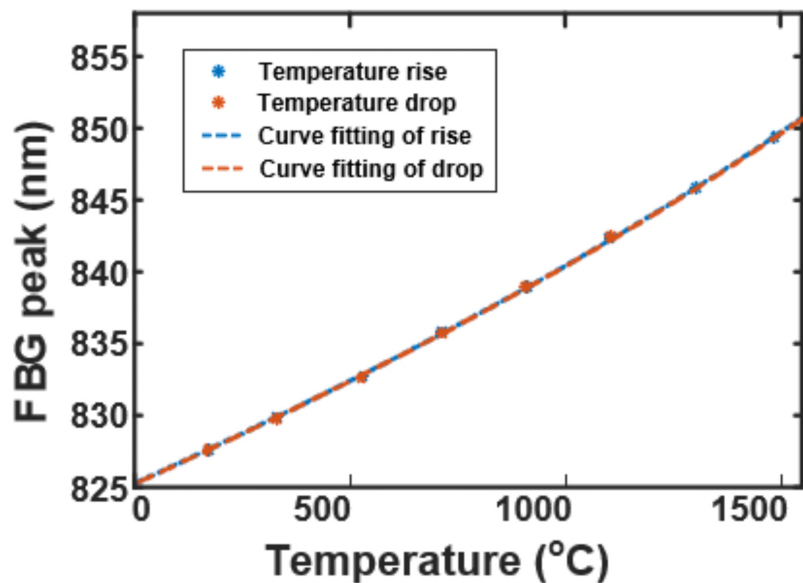
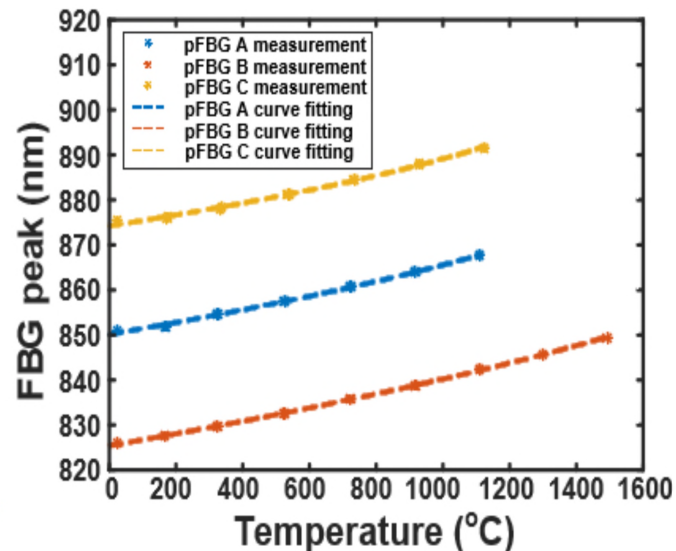
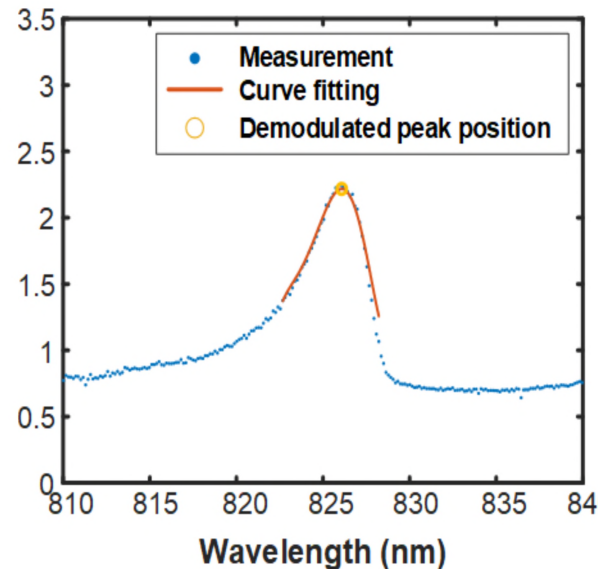
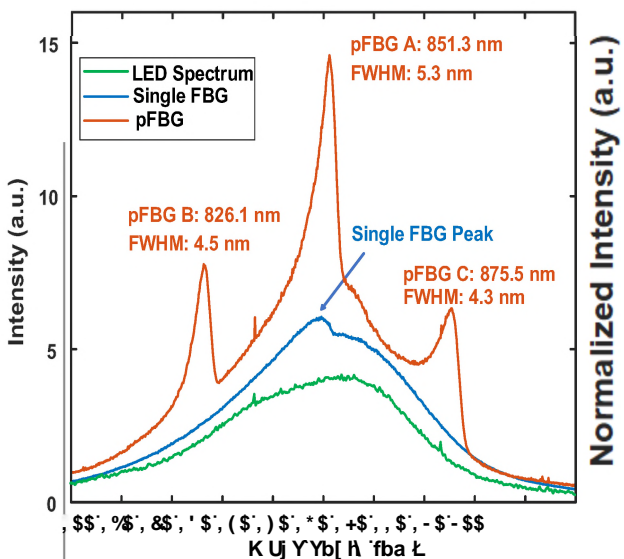
Silica-sapphire fiber direct splicing



Cascaded sapphire pFBGs

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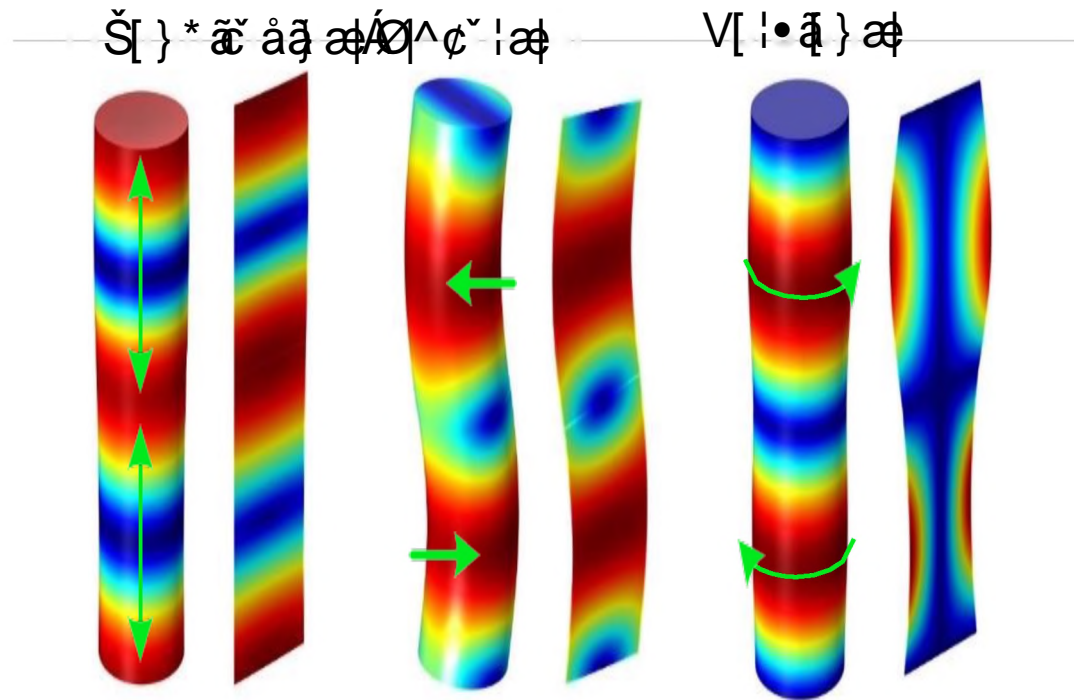


57CI GH7 : =69F'6F5;; ; F5HB; 'G9BG=B; Á
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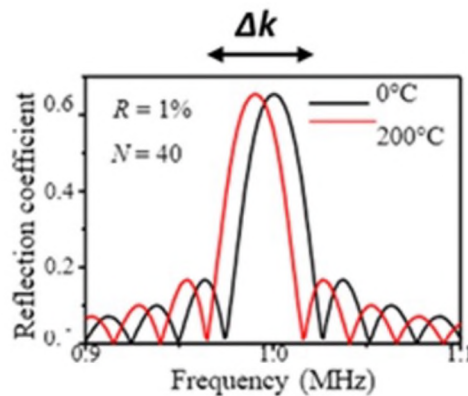
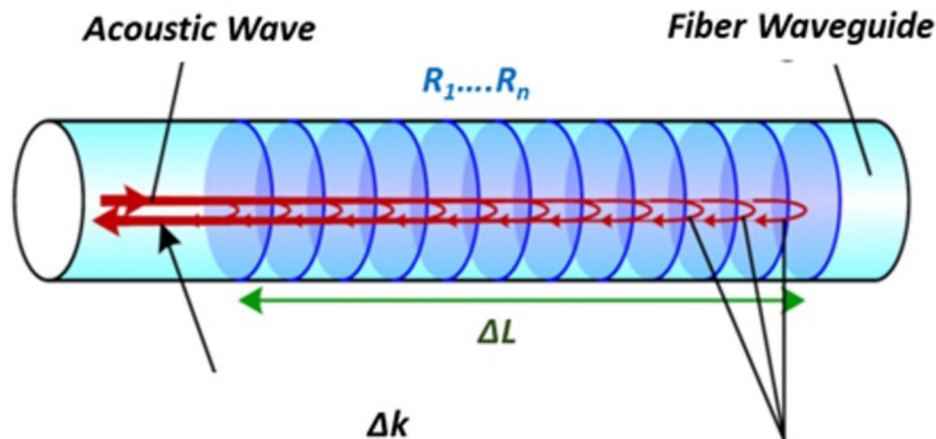
65 G7 CJ9FJ9K

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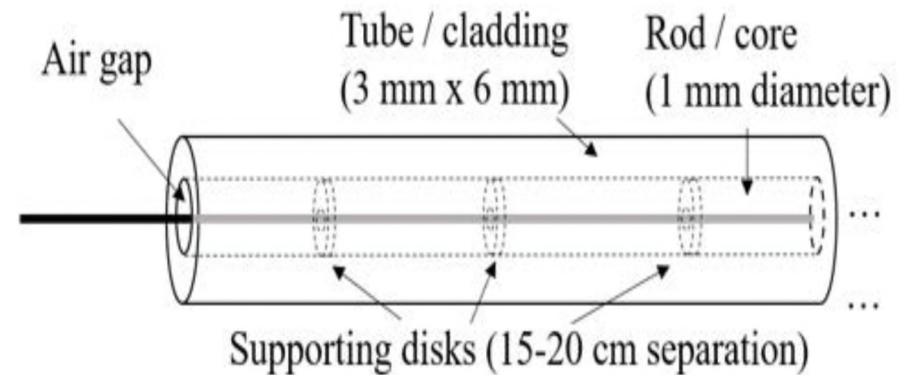
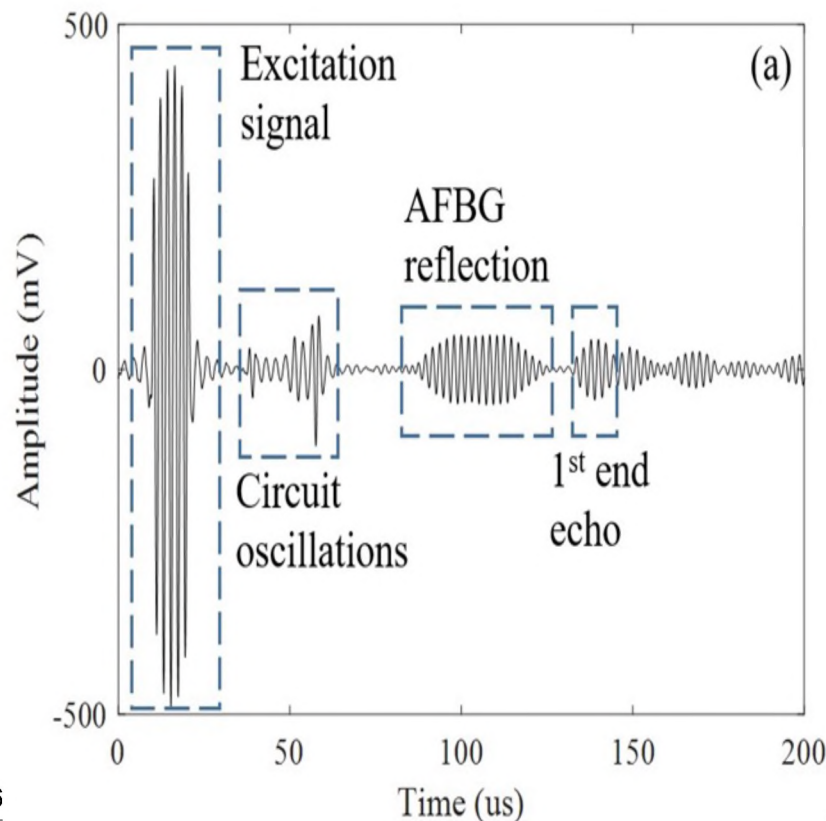


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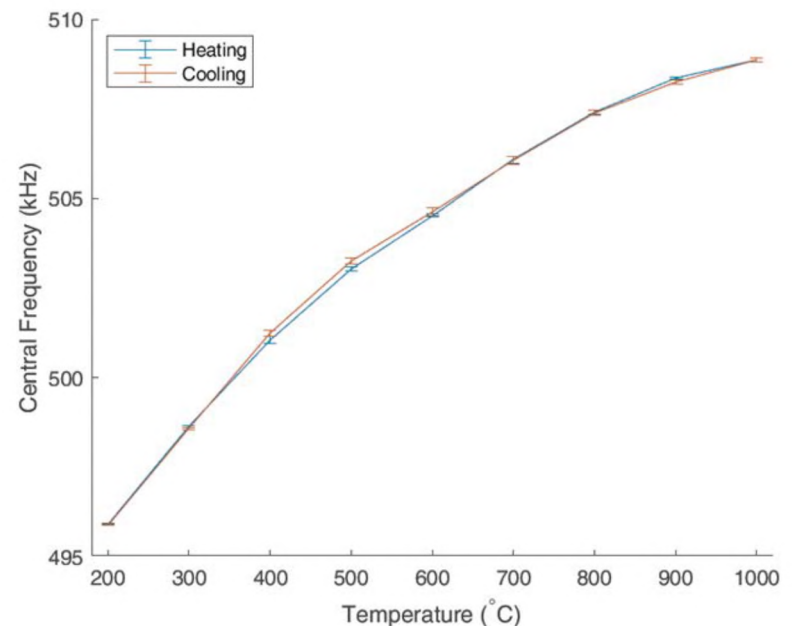
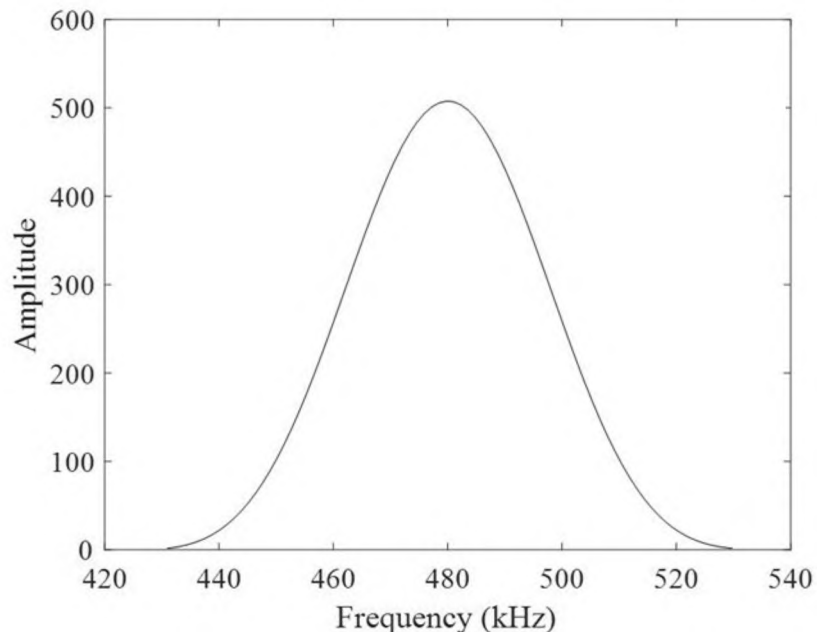
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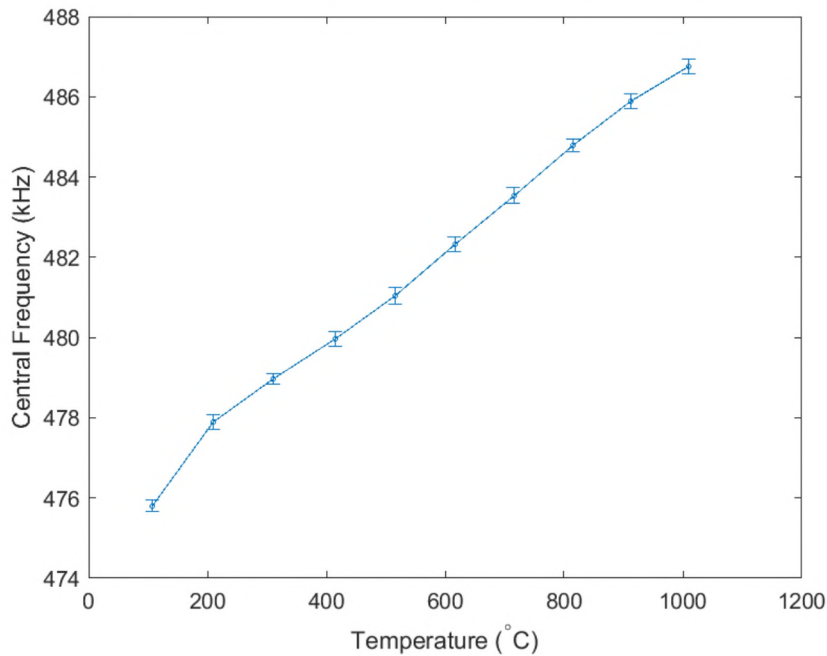
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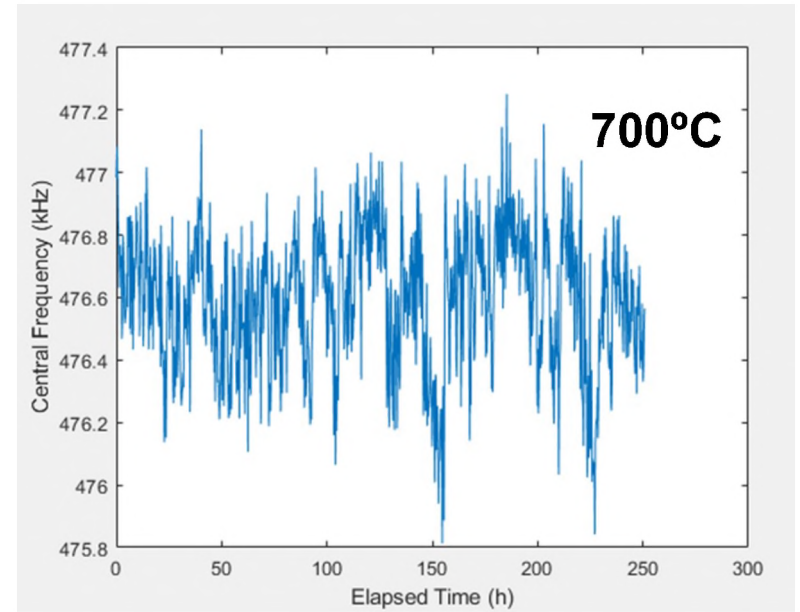
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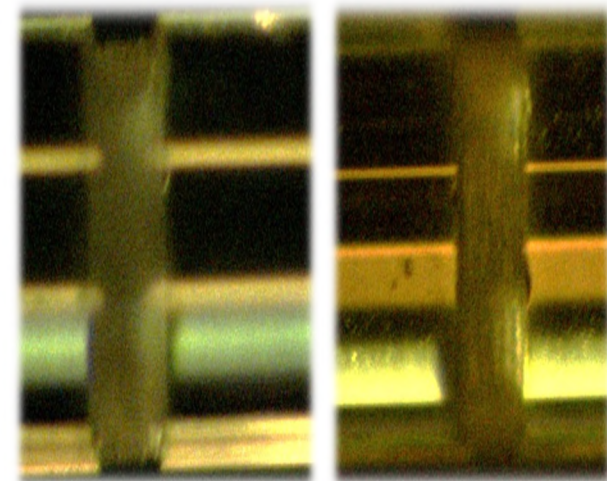
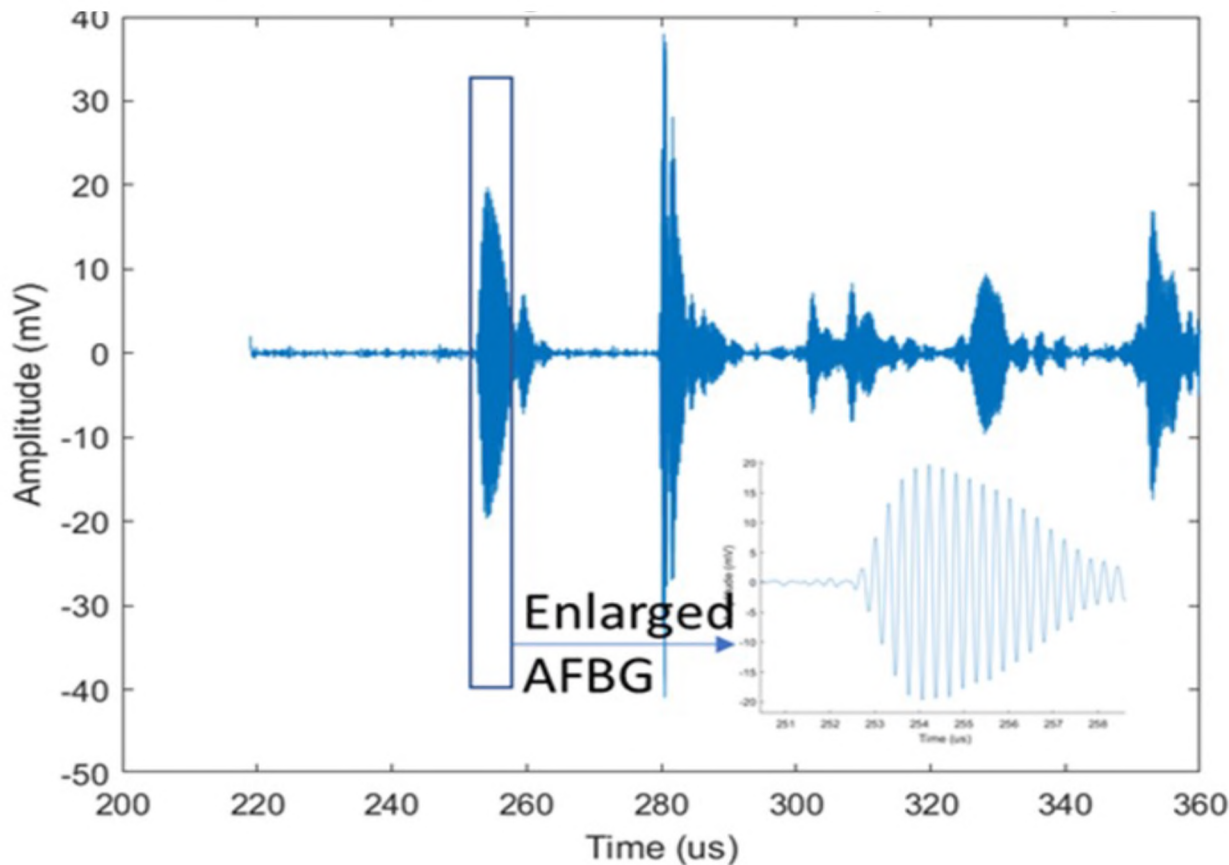
G]b[`Y'7 fmgHJ`GUdd\]fY'5 : 6 ; 'GYbgcfcg

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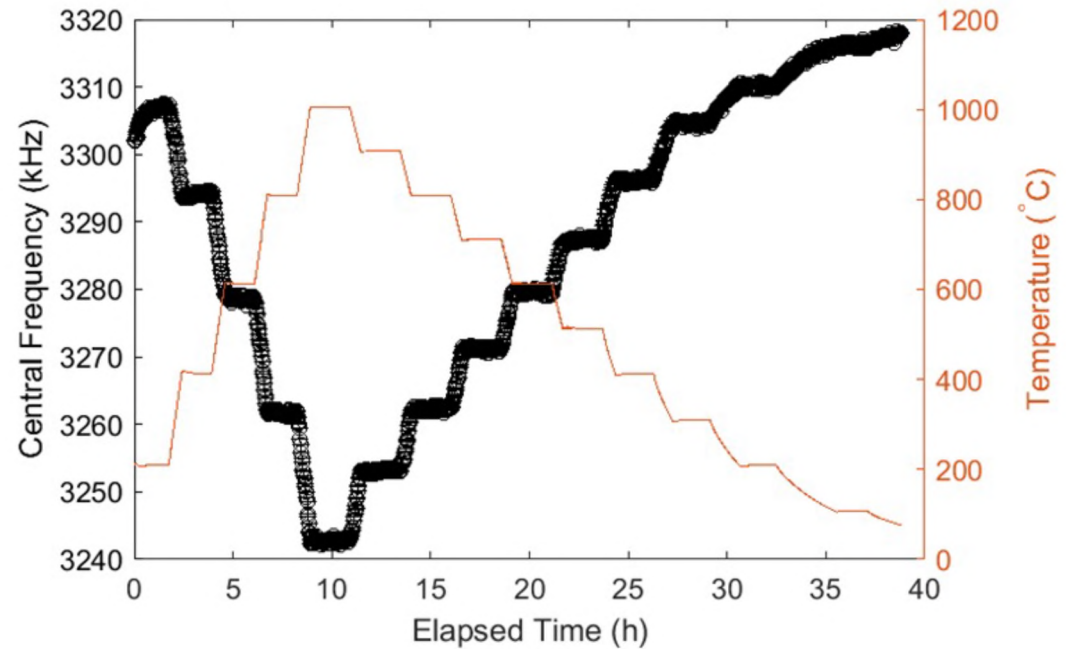
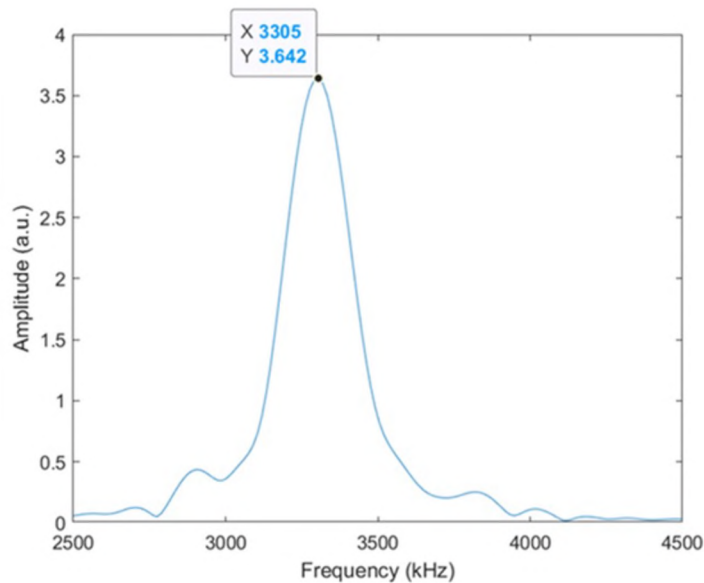
Micrographs of SCS AFBG

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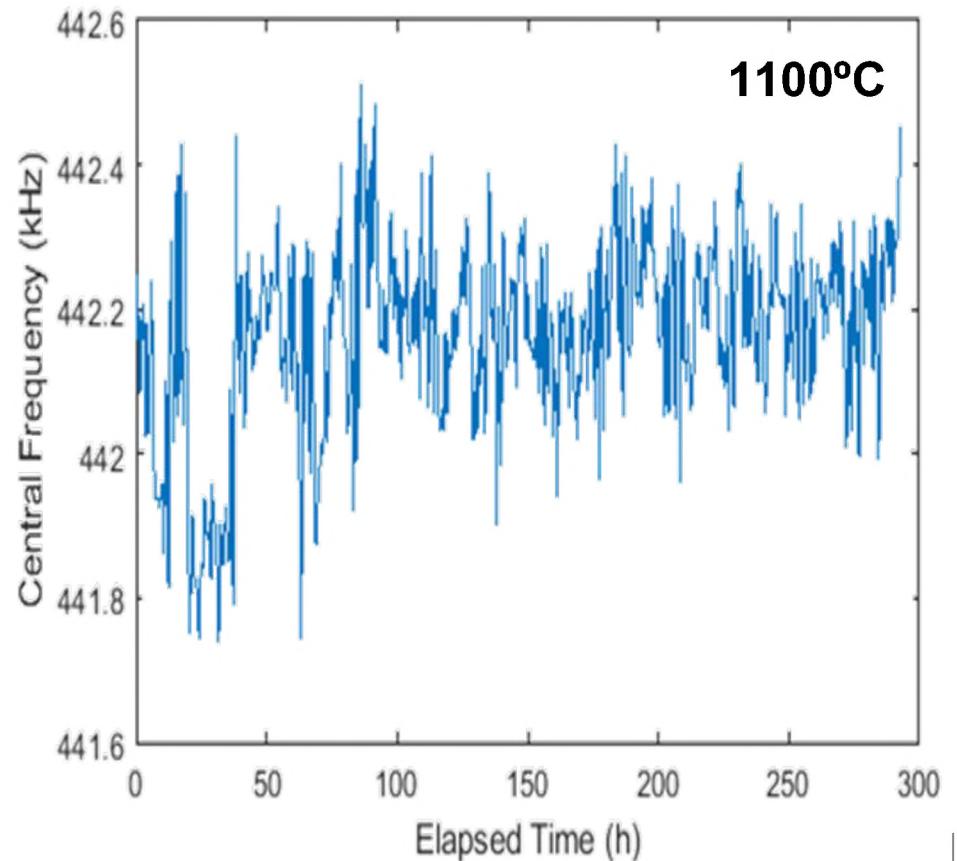
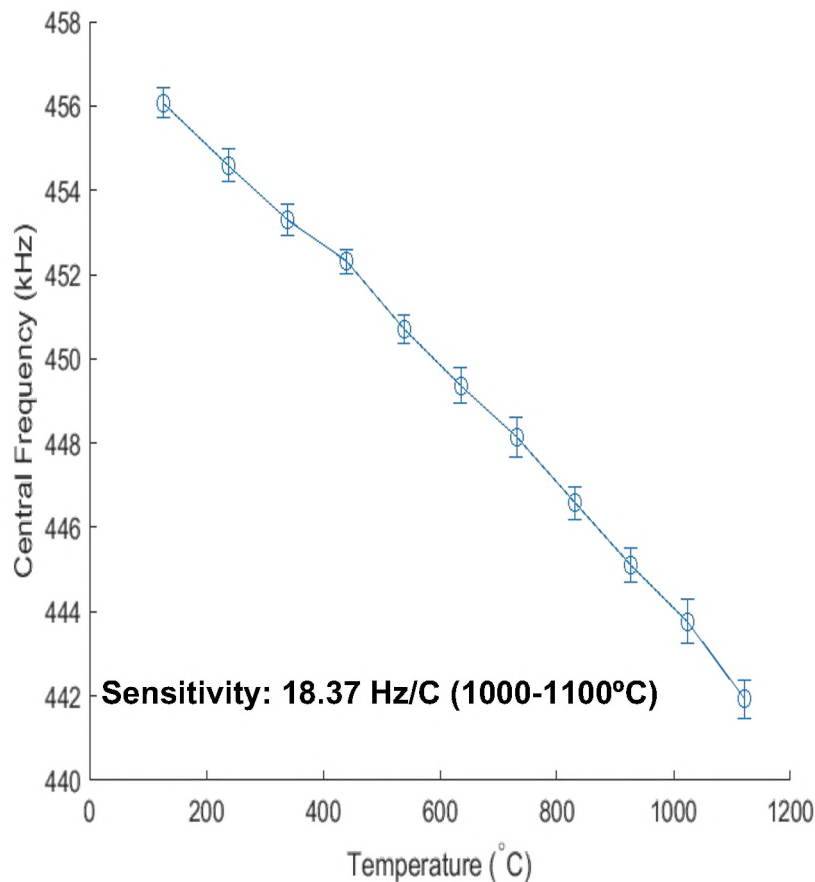


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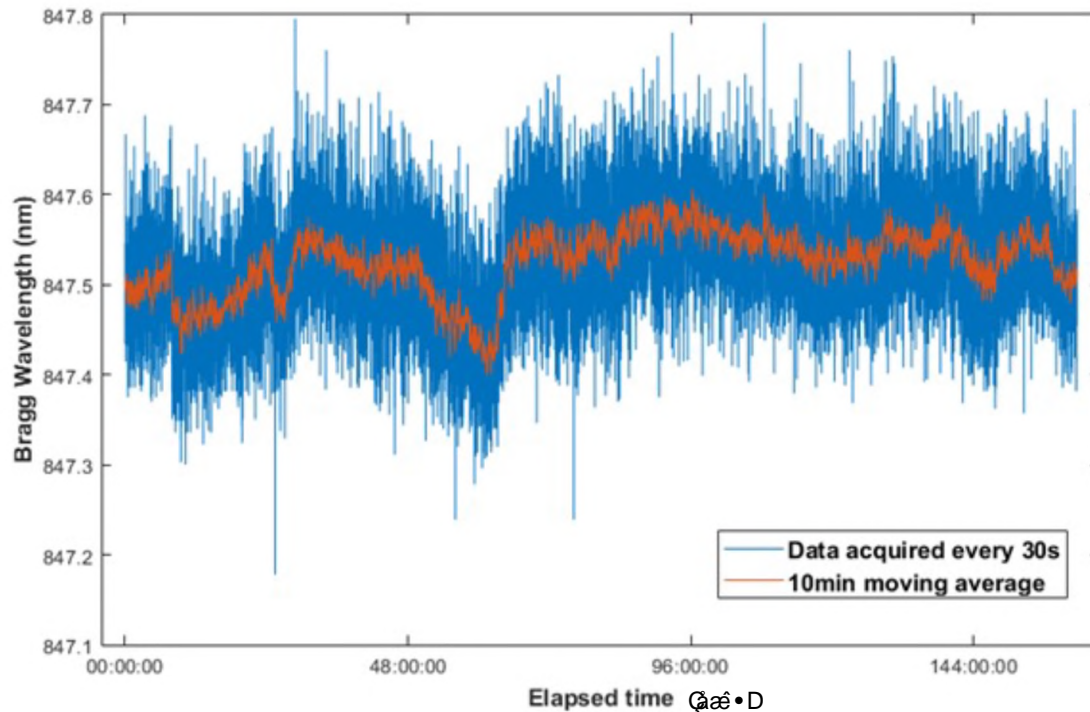
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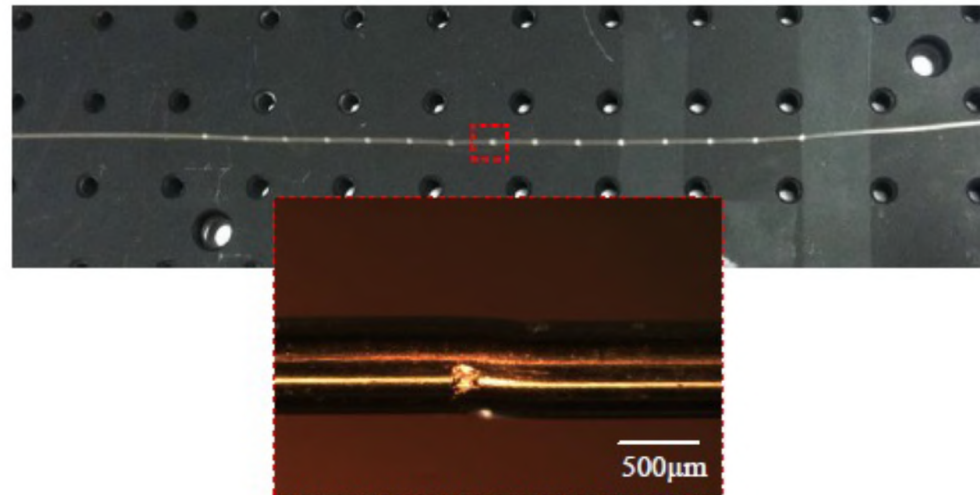
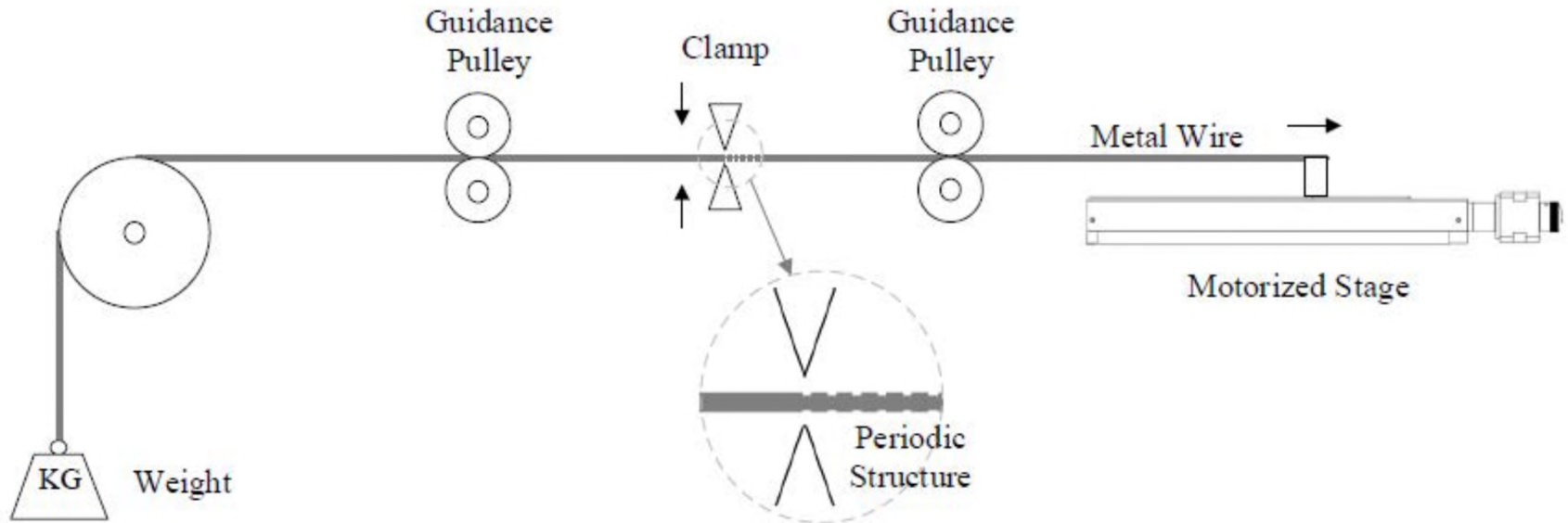
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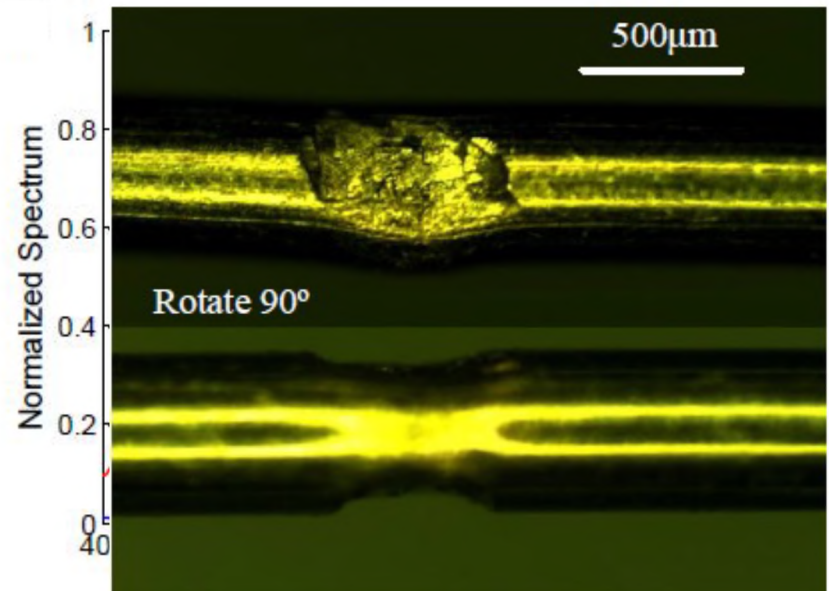
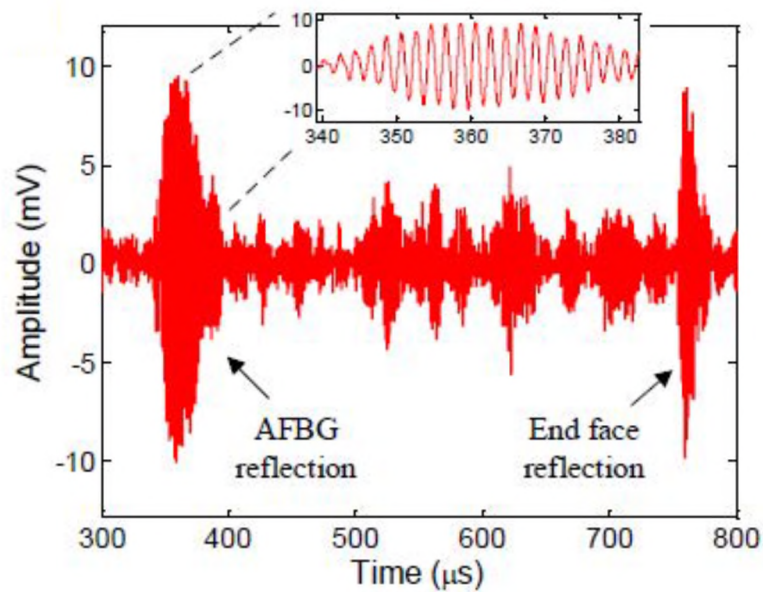
AFBG Fabrication in Metal Wire

D9 @ 7.5 B 5 @ CM+,)



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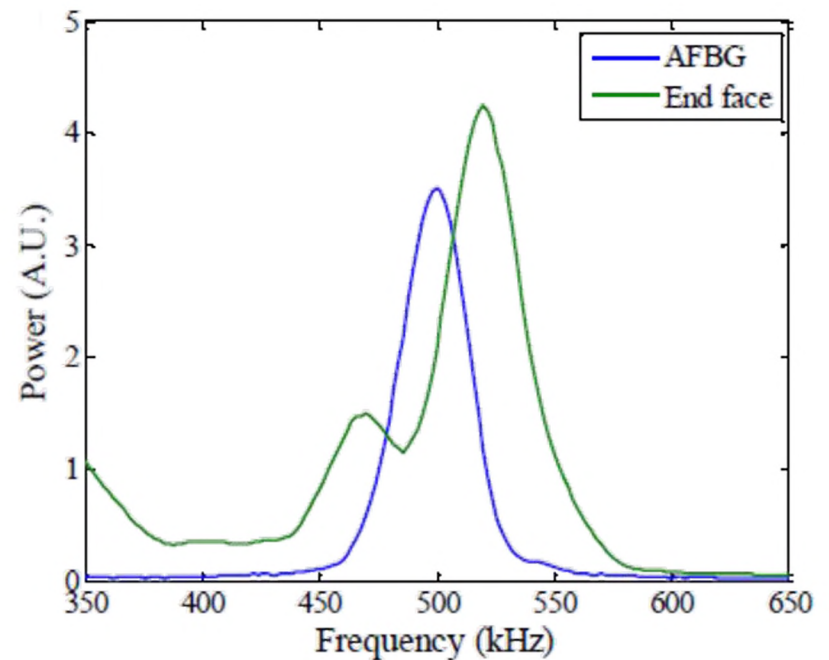
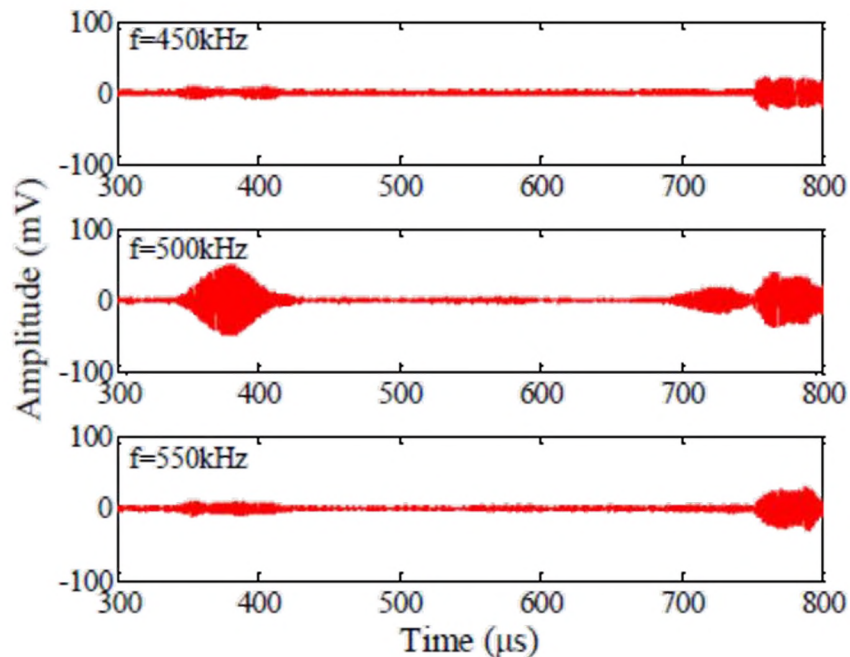
D9 @ 7 5 B ' 5 @ @ C M + ,)



5 : 6 ;]b`A YhU`K]fY

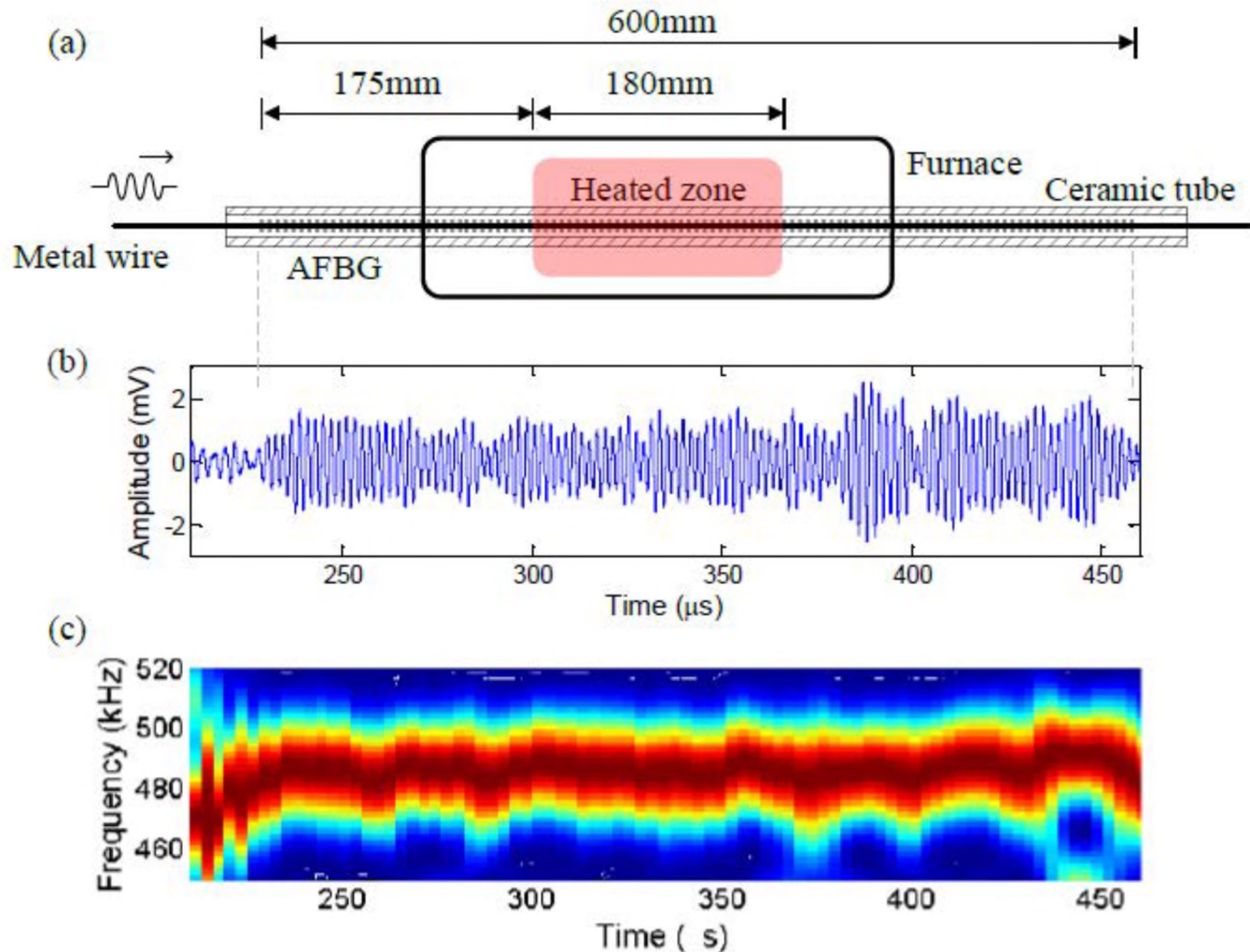
D9 @7 5 B`5 @@CM+,)

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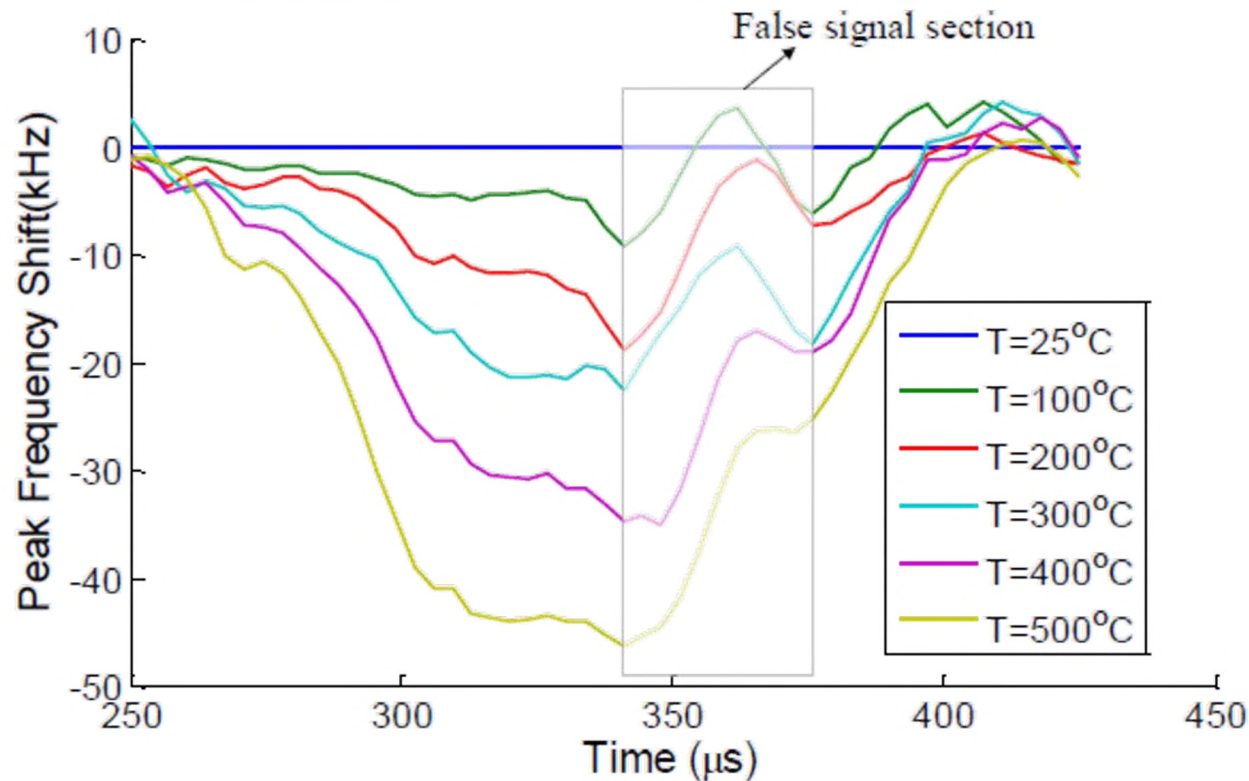
A 9 H 5 @ K F 9 ' K 5 J 9 ; I 8 9 . ' D 9 @ 7 5 B ' 5 @ @ C M + ,)



7 c b h b i c i g ' 5 : 6 ; ' Z c f ' H Y a d Y f U i f Y ' G Y b g] b [

A 9 H 5 @ K F 9 ' K 5 J 9 ; I 8 9 . ' D 9 @ 7 5 B ' 5 @ @ C M + ,)

Real temperature distribution



- : U g Y ' g] [b U ' W U g Y X ' V m i g c a Y ' g n g h Y a U h] W Y Y W f] W U ' b c] g Y ' U b X Á W U b ' V Y ' f Y a c j Y X ' k] h ' j a d f c j Y a Y b h c Z Y Y W f c b] W U c a d c b Y b h g

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