Dear editor,

Thank you for your comments and the reviewers’ suggestions on our manuscript. We have addressed all the comments in the manuscript.

**Editorial comments:**  
Changes to be made by the Author(s):  
1. Please take this opportunity to thoroughly proofread the manuscript to ensure that there are no spelling or grammar issues. The JoVE editor will not copy-edit your manuscript and any errors in the submitted revision may be present in the published version.

***Thank you for your suggestions. We have double-checked the spelling and grammar.***

2. Please define all abbreviations before use.

***Thank you for your suggestions. We have defined all abbreviations before use.***

3. Please use focused images of uniform size/resolution (at least 300 dpi).

***Thank you for your reminder. We use focused images in the manuscript.***

4. Please revise the table of the essential supplies, reagents, and equipment. The table should include the name, company, and catalog number of all relevant materials in separate columns in an xls/xlsx file.

***We have updated the table with all the information of relevant materials/equipment.***

5. Please include a scale bar for all images taken with a microscope to provide context to the magnification used. Define the scale in the appropriate Figure Legend.

***Thank you for your suggestions. We have added a scale bar for the images and defined the scale in the Figure Legend.***

6. Please use SI abbreviations for time: h, min, s, etc.

***Thank you for your reminder. We use SI abbreviations for time in the manuscript.***

7. JoVE cannot publish manuscripts containing commercial language. This includes trademark symbols (™), registered symbols (®), and company names before an instrument or reagent. Please remove all commercial language from your manuscript and use generic terms instead. All commercial products should be sufficiently referenced in the Table of Materials and Reagents.  
For example: MFP-3D Infinity Asylum Research, etc.

***Thank you for your suggestions. We have removed all commercial language from the manuscript.***

8. As we are a methods journal, please revise the Discussion to explicitly cover the following in detail in 3-6 paragraphs with citations:  
a) Critical steps within the protocol  
b) Any modifications and troubleshooting of the technique  
c) Any limitations of the technique  
d) The significance with respect to existing methods  
e) Any future applications of the technique

***Thank you for your suggestions. We have revised the Discussion and covered the details of a)-e) in the manuscript.***

Reviewers' comments:  
**Reviewer #1:**  
*Manuscript Summary:*  
The manuscript describes experimental details to reliably create the 109 domain walls by introducing a La-BFO spacer.  
The 109 domain wall in BFO has attracted a lot of attention due to its functionalities such as domain wall conduction and magnetism as well as the magnetoelectric switching.  
As addressed by authors, it has been tantalizing to obtain the stable as-grown state with dense 109 domain walls on a conducting bottom electrode.  
Accordingly, this video-based paper will be able to contribute to the advance of multiferroic study based on BFO.  
I would like to recommend the manuscript as it is.

***Thank you for your positive comments. We hope this work will promote the study of multiferroics and magnetoelectric devices.***

**Reviewer #2:**  
*Manuscript Summary:*  
So far, the 109° domain walls attracts more interests than 71° domain walls due to their superior domain wall physical properties. This article reveals a very detailed experimental process for fabricating stabilized 109° BFO thin film, which is hardly obtained while grown on the substrate with SRO bottom electrode. The key point is to insert a dielectric spacer like a 25% La doped BFO thin film to enhance the depolarization field. As a whole, this work provides a general way to stably produce the 109° BFO thin film capable of multiferroic devices.

***Thank you for your positive comments of this work.***

*Minor Concerns:*  
A minor suggestion in the protocol section, the procedure 4.  
To avoid confusing the readers, I suggest to replace the word "pre-deposit" by "Clean the target surface" because during these "pre-deposit" steps, nothing is really deposited on something.

***Thank you for your suggestions. We have replaced “pre-deposit” by “clean the target surface” in the manuscript.***

**Reviewer #3:**  
*Manuscript Summary:*  
The authors report their findings, namely that fabrication of 109° periodic domain patterns in BFO thin films by inserting a dielectric layer between the bottom electrode and the film. The results demonstrated in this manuscript are interesting and deserves to be published in this well-known journal. However, a minor revision is still needed before being accepted. Additionally, the manuscript is not well written, with examples illustrated below.

***Thank you for your positive comments and suggestions.***  
  
*Minor Concerns:*  
Comments and questions:  
1.Domain patterns are not only determined by depolarization field (as studied in this manuscript), but also remarkably influenced by misfit strain and film thickness in ferroelectric films. Please briefly describe those effects on your system. Additionally, the thickness of BFO film studied in this draft is missing.

***Thank you for your suggestions. We have briefly described the misfit strain and thickness effects in the manuscript.***

2. The stability and crossover between 71° and 109° domain patterns have been investigated intensively in rhombohedral FE films (JOURNAL OF APPLIED PHYSICS 83, 2742, 1998; JOURNAL OF APPLIED PHYSICS 110, 014110, 2011). Key aspects such as elastic, electrostatic energies and films thickness on the formation of various domains have been analyzed theoretically. However, it is claimed that different rhombohedral domain patterns (from 71° to 109°) can be realized only by controlling the misfit strain in JOURNAL OF APPLIED PHYSICS 83, 2742, 1998. Does the model can be realized experimentally based on your experiences? Meanwhile, how does the domain pattern change if the BFO is deposited on other substrates such as substrates with large compressive or tensile misfit strains, besides DSO?

***Thank you for your suggestions. We have briefly described the misfit strain effects in the introduction part. However, we focus on the protocol details to fabricate 109° domain structure in this work as JoVE is a method journal. To avoid the misfit strain effects, we are using the same substrate (DyScO3) in this work. It is worth to mention that not only the domain patterns, but also the phase structures would change if we use large compressive or tensile misfit strain substrates [Science 326, 977(2009), Phys Rev Lett 109, 247606 (2012)]. Related study is also ongoing in our lab. However, this part is beyond the scope of this research.***

3. From the scientific perspective, it is better to cite those original papers listed above (JAP 83, 2742, 1998; JAP 110, 014110, 2011) in the introduction section.

***Thank you for your suggestions. We have cited these two papers.***

4. Several language and grammar problems(such as a variety of phenomena instead of phenomenon in the abstract part, line 64 metallic instead of metal)

***Thank you for your suggestions. We went through the whole manuscript and revised the language and grammar problems.***

We hope the revised manuscript is ready for publication. Thank you for your consideration.

Best,

Deyang Chen