Dear editor,

Thank you very much for giving us a new opportunity for working on the manuscript. We would like to thank all reviewers that are expending their time on it. We have analyzed the suggestions. We are answering all the comments below. Moreover, you can see all main changes highlighted in red in the manuscript.

Reviewer(s)' Comments to Author:  
  
Reviewer: 2  
  
Comments to the Author  
All the queries were answered by the authors.  
Finally, Conclusions is presented in the summary form, which is difficult for the readers to pick the conclusion remarks. Hence conclusion may be revised and presented in points  
  
Maybe accepted after this modification

Thanks for your input. We are coming up with a new version with the conclusions in bullet points.

Reviewer: 7  
  
Comments to the Author  
Dear Authors,  
No more comments from my side.

Thanks for your comments.

Reviewer: 1  
  
Comments to the Author  
The authors have revised the paper based on the suggestions. I recommend the paper for publication in the journal.

Thanks for your comments.

Reviewer: 5  
  
Comments to the Author  
Accepted

Thanks for your comments.

Reviewer: 6  
  
Comments to the Author  
The uncorrect visualization of Figure 3b is still on the paper.  
See previous comment: Figure 3b – Unit of Printing speed (Young Modulus) is not completely visible in the graph.  
  
The important info about the recycling process (even if the authors wrote " Normally, the mechanical recycling process is used to create this type of  
recycled bend filaments.) is still missing. It's better to add it!

We agree that despite not having the details of the recycling process we can make a general comment on that as suggested. We are including a comment like that based on a new reference (Park and Fu, 2021). Moreover, we have included the filament manufacturers.  
  
Associate Editor's Comments to the Author:  
  
Associate Editor  
Comments to the Author:  
Associate Editor Comments  
1.        In the abstract you wrote, “The results showed that recycled PLA may be used thanks to the similar resistance, even though this is slightly lower than that of the virgin material”. Please revise and correct the word resistance cannot be correct, be specific about the mechanical property you are referring to. This mistakes occurs throughout the paper.

We have changed it in the manuscript.   
2.        A reviewer has picked up that Figure 3 is still not clear the units for speed are cut.

3.        Your conclusions are still not focused and written in good grammar. Pease make them into bullet points and clearly include contributions to science. An example of incorrect grammar is in the last sentence of the conclusions. Another example is how you are using “there is a retention of the maximum load”. This needs to be corrected.

We have changed the conclusions and presented them with bullet points.

4.        Please do not use region A and B in conclusions. Conclusions should be able to stand along and capture the generic findings.

We removed the references to these two regions A and B, and wrote a bullet point easy to be understood.

5.        Please get the paper proof read by an English expert.

6.        Revise title for Section 3.2, focussing on what?

We have changed it to “Focusing on the infill density”

7.        Revise the title of section 4.2, normally it is limitation of the study.

We think that you are referring to section 4. We changed it to “Discussion and limitation of the study”  
8.        Text in Figure 5a is not clear.  
We suppose that you are referring to the text written in the specimens. This is the same as we are writing in red. It adds no value and it would be very difficult to make it readable taking a picture to all the specimens as we are doing.

9.        In Figure 4a it is not clear which one is virgin and recycled.

We have included a footnote for clarity.

Note: V: virgin; R: recycled

10.        In Figure 4b the captions for virgin and recycled should be in the graphs. Each graph much be complete.

11.        Your paper highlight show the results but do not articulate the science for those results. This needs to be captured and woven into the paper as well.

In the previous revisions, we improved the discussion, trying to maintain the length of the paper. So, we discussed, for instance, the type of fractures obtained against the main findings in the literature, the influence of the main factors, the effect of perimeters and the influence of printing the layers in the tensile direction.

We are including some additional comments in the discussion and writing the new conclusions trying to capture the main ideas of the study.

In case that there is anything that must be discussed in more detail, we can try to do it. There are too many things in the paper that could be discussed in more detail, but we think that this draft gives a good overview of our study in more than 7000 words.