

Dear Associate Editor,

Peace be with you and your family.

On Aug. 24, 2023, we submitted the attached paper to *Polymers*, and received a manuscript number that had been assigned polymers-2601344. On Sept. 25, 2023, we received your comments. Those comments are all valuable and very helpful for revising and improving our paper, as well as the important guidance to our research findings. We have thoroughly revised the manuscript according to the comments and recommendations.

Comments	
Reviewer #5:	Responses to reviewer's comments
Check the units format in, there should be no space in between number and power.	Spaces between numbers and units have been removed.
Line 250-251, equation in line is larger than the normal text.	It's been turned down.
Fig 13, the author can present the whole equation on the text, using linear fit in this case is not optimal.	When I read this section carefully, I realized that it did not contribute much to the research topic, and based on the reviewer's comments, we deleted this section
Reviewer #6:	Responses to reviewer's comments
Page 4 Line 129: please correct the typo. It is "substantial" instead of "substantia".	modified
Table 1: if possible, add the standard deviation for all values presented in Table 1.	Already added standard deviation in Table 1

Table 2: please better discuss the Tonset and mass residue results presented in Table 2 on the main text of section 3.1.	We have analyzed this section, but removed the data and analysis of the residues because it is not very relevant to the study of the article
Figure 4: I suggest remove Figure 4 from the manuscript. The variation of Ea with conversion as presented in Tables 3 and 4.	Deletions have been made in response to comments
Section 3.3: please better comment about the relationship between sample thermal degradation and the both mechanism proposed (A2 and D ZLT3). How the sample degraded when A2 or D ZLT3 mechanism occurs?	Thermal degradation mechanism is not the focus of this paper and there are no scholars in all the references of this paper to analyze this part of the sub-study, this study only focuses on whether overload faults change the fire hazard of the conductor, so I'm sorry that the authors can't analyze the chemical reaction mechanism in detail because it's not the authors' research field.
Table 6: I suggest remove Table 6 from the manuscript. The same information as previously presented in Figure 8.	Table 6 has been deleted as requested
Section 3.5: compare the results of this work with others from the literature, which evaluated combustion characteristics of XLPE.	Thank you for your comment, we have not yet found a research article on the combustion performance of XLPE conductor, about this article is mainly for the combustion of the cable, and the diameter of the cable, the thickness of the insulation is much larger than that of the XLPE conductor, so the comparison between each

	other and not based on the same specifications, so there is no significance of the comparison between each other!
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Thanks again for your work on our manuscript.

Sincerely yours,

Yang Li, PhD, Associate Professor

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