Dear Editor,

Thank you very much for considering our paper “Supercontinuum generation in highly birefringent dual-mode fiber” for publication in Photonic Letters of Poland.

I truly appreciate the work of the reviewer. The detailed list of reviewer comments and our answers are listed below. I attach the corrected version of the manuscript to the email. Corrected manuscript takes into account the Editor’s comments.

Yours sincerely,

Michalina Jóźwik

**Reviewer A:**

**The manuscript contains very interesting experimental results. However it needs corrections before it can be accepted.**

**Detailed remarks:**

**1. First two paragraphs contains very general claims without direct relation with content of the manuscript. It should be removed. Authors should provide their motivation related to SG in the proposed fiber. Why this fiber was selected? Is it any better than other fibers reported in literature?**

Answer: Thank you for this comment. We agree that first two paragraphs contains general claims. They provide an introduction to the topic and present the current state of knowledge. The aim is to make easier understanding of the results to those readers who do not deal with issues of supercontinuum generation. We have added sentences connecting these paragraphs with the proposed fiber. Please find the added parts.

**2. Geometrical details of the fiber should be provided. What is refractive index of Ge doped core?**

Answer: Thank you for this comment. Please find added information in corrected manuscript.

**3. Optical properties of the fiber are missing. How many modes are guided? What is attenuation and effective mode area of FM and HOMs? What are the nonlinear coefficient for modes?**

Answer: Thank you for this comment. In manuscript, we present dual-mode fiber - first two modes are guided. Simulations of the fundamental and second order modes have been placed in the corrected manuscript. We have also added information about optical properties of the fiber. Please find the added parts.

**4. What is a coupling efficiency to FM and HOMs? Measured or calculated.**

Answer: Exciting of the FM and HOMs in this case highly depends on the setup used to introduce the light into the fiber - coupling takes place in the free space and there is no possibility to measure coupling efficiency. The interpretation of the excitation particular modes can be carried out by the observation of generated nonlinear effects.

 **5. Page 2 column 1 paragraphs 2: The authors should provide peak power.**

Answer: Thank you for this comment. As the reviewer suggest, we have added information about peak power of the pulse laser. Please find the added information in corrected manuscript.

**6. Fig. 3 what is added value of Fig. 3 with respect to Fig. 4. I suppose it should be removed.**

Answer: Thank you for this comment. We followed the reviewer suggestion by removing Fig. 3 from the letter.

**7. Page 2 column 2 paragraph 1and 2 contains claims without any relation to experimental data. It cannot be accepted as it is stated. The authors should relate their clams to particular features of generated spectrum or provide numerical analysis.**

Answer: These two paragraphs contains analysis of the experimental data presented in Fig. 3-6 registered with the use of Optical Spectrum Analyzer. Combining the observed experimental results (Fig. 3-6) with the analysis of the dispersion characteristics of the fiber (in particular ZDW) allow to determine the effects responsible for broadening the spectrum for specific modes. Dispersion characteristics and obtained results are strictly connected and allow the analysis of the nonlinear effects in a relatively simple way.

**8. Fig. 4. It is not clear what is a contribution of FM and HOM to supercontinuum generation. The authors should explain it.**

Answer: Thank you for this comment. We followed the reviewer suggestion by adding some sentences explaining this. Please find the added fragment in the corrected manuscript.

**9. ?Broadband spectrum was generated in conditions when both modes (fundamental and HOM) are excited. This is due to specific difference between their the zero dispersion wavelength. SC generation in the fiber during pump power changes gives possibility do observe both nonlinear mechanisms, which are characteristic for normal and anomalous dispersion regime pumping.? I do not understand what the authors have in mind? What is an advantage to observe ?both nonlinear mechanisms?? Is there any advantage in case of SG? The Authors should explain it in more details.**

Answer: Presented analysis have scientific value - for the first time we have shown and observed the phenomenon when we pump the fiber in two dispersion regimes (normal and anomalous depending on the mode) at the same time, by employment of two modes having properly located ZDWs .

**10. 10. I would expect that the authors study polarization properties of SC if highly birefringent fiber is used. Otherwise motivation of this manuscript should be revisited.**

Answer: This is the first manuscript in the series, which presents birefringent, dual-mode fiber used for supercontinuum generation and at the moment we just present broadband spectrum generated with the excitation of the two modes. The possibility of tuning and analysis of the influence of polarization will be described in the other paper.

**11. Page 3 ?In addition, such fiber allows an easy tuning of the generated spectrum by varying the excitation conditions (excitation of different mode at the fiber input, which can be used in many applications.? Authors should explain and show how to easy change excitation conditions. Indeed it is very interesting if demonstrated.**

Answer: Thank you for this comment. We agree that it is very interesting, however this is not the subject of the manuscript. Certainly it will be examined in the future and will be demonstrated in the next article.