Dear Editor,

Thank you very much for considering our paper “Supercontinuum generation in three-fold symmetry microstructured fibers in visible and infrared spectral regions” for publication in Photonic Letters of Poland.

I truly appreciate the work of the reviewer. The detailed list of reviewer comments and our answers, as well as all additional modifications in the manuscript are listed below.

Yours sincerely,

Zbyszek Hołdyński

**Reviewer A:**

**The manuscript contains a lot of interesting information, but in current form is unclear for readers. In general the authors should decide what is main topic of this LETTER. The authors try to present experimental results for 9 fibers with various dispersion characteristics and various SG processes within 4 pages. As a result we receive low quality paper without details. I strongly suggest to rewrite the manuscript and focus on one group of fibers with similar properties and study their ability to generate a ?stable? supercontinuum. ?Stability? should be also defined.**

Answer: Thank you very much for this comment. In order to make the manuscript more convenient, we added supercontinuum flatness aspect as a main topic of Letter. We also removed the supercontinuum stability aspects because of its unclear meaning (intentionally stability was introduced as a flatness). As far as the title of proposed manuscript indicates three fold symmetry fibres for systems and components, we find section about 9 different three fold symmetry fibers interesting for the readers.

**Detailed remarks:**

**1. 1. Content of abstract doesn?t feet to the content of the manuscript. I don?t find in the paper information about stability of the spectra (what do the authors mean as ?stability?),**

Answer: Thank you for this comment. Supercontinuum stability aspect was replaced because of unclear meaning we added information about supercontinuum flatness as our topic. Our intention was to describe flatness (difference in spectral power) at infrared range. For fibers D and E, we obtained spectral power level difference at the level +/-3dBm in range 1200-1700nm.

**2. Page 1 section 1 ? very general introduction not related directly to the content of this paper. Motivation of the paper should be stated clearly and explained in more details.**

Answer: Thank you for this comment. We added more general information about microstructured fibers to develop interesting introduction for non-specialised readers. We described advantages and disadvantages of high air filing factor suspended core fibers to more clearly found advantages of three fold symmetry fibers.

**3. Geometrical details of the fibers should be provided.**

Answer: We added information about geometrical parameters of our fibers in corrected manuscript. And also we added information about transmission characteristic of fibers A, B and C.

**4. Information about modal properties of the fibers should be provided. Also other optical properties, attenuation, effective mode area, dispersion slope, nonlinear coefficient, coupling efficiency are missing**

Answer: Thank you for comment. We added information about transmission characteristic of our fibers (A, B and C) and their strong influence on supercontinuum generation limits.

**5. Fig. 2 Why fiber B gives the most broadband SC? How these 3 spectra are related to ?stability? issue?**

Answer: Transmission characteristic of fiber B allow to create long and short wavelength part of supercontinuum. Stability aspect was replaced to flatness (difference between spectral power in telecom range) parameter. In our experiments spectral flatness can be archived in long wavelengths side for fibers D and E.

**6. Page 2 section 1 ?In fibers A, B, and C the effect of fiber loss influence on visible part generation is clearly seen.? It is not clear. The authors should explain this claim.**

Answer: Thank you for this comment. The transmission characteristic gives information about possibility to formation long and short wavelength spectrum. We added transmission characteristic of designed fibers A, B and C. In fiber A high loss above pump wavelength play crucial role on limited possibility of solitons formation.

**7. Fig.3 Infrared part spectra has ?noise-line characteristics. The authors should explain why.**

Answer: Thank you for this comment. Noised effect in infrared part of generated spectra can be connected with pump source slight instability. Also decreased efficiency of continuum generation (above 1400nm) could play influence on spectral characteristic. Noise effect will be discussed in next publications.

**8. Fig. 3. The authors identify some features as SRS. Why? A numerical explanation is needed**

Answer: Please find the added information about SRS peak and their clear connection with Raman response of silica (maximum Raman gain for silica fibers is for 13.5THz from pump wavelength frequency). Frequency domain representation of SRS peak (fibers D, E, F, and G, H, I) gives frequency shift above 13.5 THz (in the same position as maximum Raman gain).

**9. Page 2 ?Fibers D, E, F have different ZDW position but their difference doesn?t change the nonlinear mechanisms domination and plays minor role on a generated spectrum shape? Difference of ZDW between these fiber is below 10 nm! They are almost identical! ? The authors cannot conclude about influence of ZDW position on nonlinear mechanisms based on this example. Or better explanation is needed. What about ?stability? of SG? Is it stable for D,E and F?.**

Answer: Thank you for this comment. As the reviewer suggest, fibers: D, E, F are very similar and their geometrical difference play minor role on nonlinear mechanisms domination. In presented fibers , D, E, and F we wanted to show how slight geometry changes play influence on supercontinuum spectral flatness. Stability term was unclear and we removed it from consideration.

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**10. Fig. 4. The symbols S1, S2 and S3 are not explained. Numerical evidence of SRS is needed if this feature the authors had in mind**

Answer: We added missing information about presented symbols. We also explained SRS effect origin by analysis generated spectra in frequency domain.

**11. Page 3 ?The geometry I consists of three large air holes, which give shift of the ZDW to 1112 nm. Normal dispersion regime pumping enables to obtain SRS spectra. In fiber I where ZDW position is close enough to pump wavelength the parametric FWM process is also observed.? I do not agree with explanation. I am convinced that fiber I is multimode. Authors should take this into account when SG is explained.**

Answer: Thank you for this comment. Reviver suggestion about unclear explanation of SRS and FWM effect in fiber I are correct. We added explanation about supercontinuum generation in presented fiber by analysis spectrum evolution in pump power changes by considering only fundamental mode. Multimode effect in fiber should be taken into account and will be discussed in next publications. In our experiments we was focused on excitation supercontinuum from domination fundamental mode during nonlinear propagation. Please find the corrected description in the manuscript.

**12. Page 3. Conclusions are a list of claims without proof. E.g. ?Three fold symmetry fibers give possibility to precisely control the nonlinear effects, which play a major role in the spectrum broadening. We have shown that nonlinear effect domination can be controlled better when fibers are pumped far from the ZDW (e.g. in fiber C and I).? I cannot find reference for these conclusions in the paper. Where is stability of fiber I discussed? C,B,A fibers have very similar dispersion characteristics but SC generated in these fibers are completely different. Where is the ?stability? in this case?.**

Answer: Thank you for this comment. As the reviewer suggest we explained the role of domination nonlinear effect during geometry changes and also we focused on supercontinuum flatness case as important factor in future application of generated sources. Also possibility to generate narrow bandwidth sources (with easy process of spectral range control) in fibres G, H was mentioned in summary.