Response to Reviewer 2

The reviewer comments are in italics and our responses are in regular font. We thank the reviewer for reading our paper and providing valuable feedback on our work.

Comment 1
Page 4 Line 96: It is not specified (not even in Table S1) at what sampling temperature aerosol particles are measured inside the second dilution line. Temperature strongly affects particle size distribution of OA because the abundance of semi-volatile compounds. If it is near ambient, the experiments represent a sort of theoretical upper limit for the emission of OA particles into the atmosphere, because all other processes that are admittedly not considered would reduce OA emissions and increase the emission of permanent gases and soot.

The sampling was done at near ambient temperature during the experiments. We added that to section 2.1 line 106. The possible transformations of the OA precursors are discussed in the introduction line 35- 44. In this work, the conditions selected allow for two transformations of the precursors, OA formation and secondary pyrolysis reactions. At 600°C, secondary pyrolysis reactions may consume OA precursors at 400 and 500°C the precursors may form OA without any other transformations. With the sampling at ambient conditions, OA can be formed, and the yield of OA at the end of the experiment can be the maximum yield that wood can form OA. We addressed that in the results section 3.1 line 230.

Comment 2
Page 4 Line 103: The reported observation that "a dark, heavy, sticky, material was released in some experiments" is very valuable because it indicates that formation of tar balls, a very significant subgroup of brown carbon particles in the atmosphere. While I understand that this compounds cannot be collected as particles due to experimental limitations, it might be very useful if their presence were indicated e.g. in Table 1 either with Yes/No or with some semi-quantitative visual classification (e.g. +, ++, +++) if they can be reconstructed from the experimental records.

This request has been added to table 1.

Comment 3
Page 4 Lines 258–260: These seemingly contradicting findings may be rationalized by the potentially different chemical compositions of organic compounds released when water is present due to supplementary processes such as steam distillation. However, it seems that on a mass basis energy reduction by the presence of water predominates in all cases observed.

The chemical composition of the particles is beyond the scope of the paper. Without more information on the conditions of the experiments in each paper we can't attribute to the difference in emission to energy reduction or chemical composition of the particles. However, our work shows that during pyrolysis particle emission is reduced in woods with high moisture content compared to woods with low moisture content.

Comment 4
Page 4 Lines 112–115: Names of tree species must be written in italics

This has been changed.

Comment 5
*Page 6 Line 161: Typographical errors: the character En dash should be used here and the symbol instead of **

This has been changed.