

Journal: ACP

Title: Application of a Hygroscopicity-Tandem Differential Mobility Analyzer for characterizing PM Emissions in exhaust plumes from an Aircraft Engine burning Conventional and Alternative fuels

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MS Type: Research article

The authors describe well their analyzer system and pertinent application results. The aerosol hydroscopic property measurements are relevant, especially with the inclusion and comparison for alternative fuels. I highly recommend the paper for publication. I offer the following suggested edits and comments:

Page #	Line #	Suggested Edits or Comments
1	20	Replace "fuels" with "types of fuel"
1	23	"decreased" is spelled incorrectly
2	3	Change "on" to "onto"
2	16	Place a comma after "plume"
2	31	Change "45s" to "45 s" or better, change to "45 seconds"
3	7	"an ice bath to dry the sample" ... is not fully unclear. Please elaborate.
3	14	Change "poly-dispersed aerosol was classified" to "poly-dispersed aerosol was classified by size"
3	16	Throughout the paper, the tense switches from "was" to "is". I am not sure the change is always correct. Maybe an expert in grammar should review and make suggestions.
3	17-18	The word "now" is not necessary and should not be used in this manner in a formal paper.
3	20	Suggest that "Valves V2 and V3 can direct ..." be changed to "Valves V2 and V3 are used to ..."
3	21	Suggest that "Valves V4 and V5 achieve ..." be changed to "Valves V2 and V3 are used to achieve ..."
3	25, 26, 28	I consulted with colleagues and we are not familiar with the use of the term "thermostat" being used as a verb. Suggest not using the term "thermostated" in a formal paper.
4	5	Add comma after "frequency"
4	6	Change "it(1)" to "it (1)"
4	31	Add comma after "Thus"
5	1	The word "very" should not be used in a formal paper.
6	2	Suggest using a simpler Fig. 1 title with this long explanation in the body text.
6	6	"discuss" should be "discusses"
6	9	Change "deliver a given diameter Xd particle" to "deliver sample with a given diameter Xd particles"
6	10	"initiates voltage sweep" should be "initiates a voltage sweep"
7	11-12	Change "... this calibration is then later utilized ..." to "... this calibration is utilized"
7	7	Change "when it is exposed ..." to "... when exposed ..."
15	4	Change "will be" to "are"

15	22	Change "20nm" to "20 nm"
15	28	Change "an existing soot particle to form a hybrid particle that subsequently has a significant water soluble component" to "existing soot particles to form hybrid particles that subsequently have significant water soluble components"
16	15	Change "This data is" to "These data are" [Throughout my career, my technical editing staff have required "data" to be treated as plural, regardless of the use.
18	13	Change "plots the GF" to "plots, the GF" or, better, combine with the previous sentence using "where"
18	14	Add comma, change "(FT plus THT) the GF is" to "(FT plus THT), the GF is"
20	1	Add colon, change "These findings are (1)" to " These findings are: (1)"