

Interactive comment on “Spectrophotometric high-precision seawater pH determination for use in underway measuring systems” by S. Aßmann et al.

Anonymous Referee #2

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I have provided extensive comments about previous versions of this manuscript in another venue. The manuscript is substantially improved relative to previous versions.

Page 1340, second sentence of the introduction: Here the authors should include additional publications that document the existence of ocean acidification as a global phenomenon. Also, the authors should include additional quantitative assessments of the annual rate of pH decrease in oceanic surface waters.

Page 1340, third sentence of the introduction: The authors should include additional, more recent assessments of the fraction of annual CO₂ emissions that become sequestered in the oceans.

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Page 1342, sentence beginning “In contrast the pKa of mCP is not specified over a large temperature range. . .”: This statement needs to be revised. The authors should note a recent publication that reports the physical-chemical characteristics of mCP over a wide range of salinity and temperature: Purification and Characterization of meta-Cresol Purple for Spectrophotometric Seawater pH Measurements (2011), X. Liu, M.C. Patsavas and R.H. Byrne, *Environmental Science and Technology* 45, 4862-4868.

Similarly, page 1353, final sentence prior to section 4.3 (Size and cost) beginning “Moreover the electrode data is more reliable in. . .”: This sentence needs to be modified in view of the publication cited above.

[Interactive comment on Ocean Sci. Discuss., 8, 1339, 2011.](#)

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