

### **Assignment #10: Written Scientific Peer Review**

In Assignments #8 & #9, you and your peers wrote original scientific papers on the general theme of *Recent Developments in Detergent, Surfactant and Amphiphile Chemistry*. In Assignment #10, each one of these papers will be evaluated by three-fold anonymous peer review. In other words, Assignment #10 provides an authentic exercise in writing constructive criticisms for three papers. The ability to provide competent criticism is an important skill and it is not easy to do so in a constructive fashion. You are required to write at least 250 words of justification in each one of three reviews. The following items may guide the preparation of your reviews.

**(a) Mini-Summary.** Start your justification with a mini-summary of the manuscript. Show that you read the paper and that you understand the main points. In this paragraph you demonstrate your competence and you can make statements about the significance / strengths of the paper.

**(b) List Substantial Criticisms.** It is the nature of scientific peer review to focus on items that require revision and, hence, this section is key to the review. State and justify your criticisms. Be direct, honest, and rigorous. Do not disparage. Do not demean. Do not be sarcastic. Show humility. If possible, suggest a way to resolve or avoid the problem in revision (without forcing your thinking on the authors). Ask yourself these questions: Is the hypothesis stated clearly? Is the approach logical and appropriate to test the hypothesis? Are the methods adequate to firmly establish what is being claimed? Would it be possible to reproduce the reported original data based on the information provided? Are the results discussed in the proper context of existing knowledge? Are the results trustworthy? Is the conclusion valid?

**(c) List Minor Issues.** List of formatting issues etc.

Submission & Target Dates: Assignment #10 must be completed with MS Word and each review must begin with the header provided in the text box below. Write each review in a separate file and name each file ([note different file name convention in A10](#)) "A10\_‘paper-

author-names'\_ 'peer-reviewer-names'.docx". Email the three reviews as attachments by Tuesday, 04/17/12, midnight. Do NOT bring hardcopies to class. Dr. Glaser and the TAs will edit the filenames of the reviews by replacement of 'reviewer-names' by 'reviewer-#' to maintain anonymity. The renamed reviews will be emailed to authors prior to Friday, 04/20/12. You will not be evaluated on your performance in the writing of the peer reviews; there is no Rubric #10. Scientists provide competent peer review for free because the members of the scientific community realize and collectively accept and value peer review as the backbone of science. The peer reviews will provide the basis for Assignment #11, revision and resubmission for second peer review by the same reviewers.

Manuscript Title:

Manuscript Authors:

Recommendation [(a) Publish as is, (b) publish after minor revisions, (c) publish after major revisions, (d) do not publish]: \_\_\_\_\_

Significance [(a) bottom 50%, (b) top 50%, (c) top 20%, (d) top 10%]: \_\_\_\_\_

Scholarly anal./pres. [(a) bottom 50%, (b) top 50%, (c) top 20%, (d) top 10%]: \_\_\_\_\_

Are the conclusions adequately supported by the data? [Yes/No]: \_\_\_\_\_

Are the literature references appropriate and correct? [Yes/No]: \_\_\_\_\_

Are the compounds reported adequately characterized with regard to identity and purity? [Yes/No]: \_\_\_\_\_

Comments (at least 250 words):