Department of Chemistry / University of Massachusetts Amherst Graduate Core Course I (891G): Physical/Organic Chemistry

Team Project #2: Journal Article Critique

Oral Presentations Due October 17-18, 2011

Objective: To criticize an interdisciplinary journal article blending the fields of physical and organic chemistry (and other kinds of chemistries if you wish). The critique will answer the question: "should this article be published?" (please ignore the fact that it already has been published). Your team will deliver this critique as an oral presentation with no written component. This is a good opportunity to practice your speaking skills. Your team will be graded exclusively on your oral presentation, and on the questions you ask of other teams.

<u>Choosing the Article</u>: The article should come from a top-tier chemistry journal, such as *Journal* of the American Chemical Society, Advanced Materials, Angewandte Chemie, and the like. Each member of your team should peruse this literature and suggest an article to critique (check out: http://pubs.acs.org/ for ACS journals; http://pubs.rsc.org/ for Royal Society journals; and http://www.wiley-vch.de/publish/en/journals/alphabeticIndex/ for Wiley journals). Your team should then discuss the choices and rank-order the articles.

You should submit your top choice ("plan A") by emailing the PDF to Profs. Auerbach and Thayumanavan by end-of-day on October 3, 2011.

We will notify your team ASAP if the article is acceptable. If so, all team members should begin their careful study of the article (and other sources needed to understand the article). Remember to read an article by first considering Abstract, Introduction and Conclusions; then delve into the details of the Methods, Results and Discussion.

If we reject your plan A, then immediately email Profs. Auerbach and Thayumanavan the PDF of your plan B, with a couple sentences why you like this new article.

Developing the Critique: There will be 4 elements of each critique, corresponding to the 4 members of your team. The 4 elements are: *summary*, *pro*, *con*, and *decision*. Each team member will provide a brief oral presentation to fulfill their role, with the aid of power-point slides. Total time for talks (all four elements) is 10 minutes; time for Q/A is another 5 minutes.

- *Summary*: one team member summarizes the objective(s), method(s) and result(s) of the paper, remaining as neutral as possible regarding the article's publishability.
- *Pro*: another team member highlights the positive aspects of the article, emphasizing the ways in which the research is (*i*) interesting, (*ii*) novel and (*iii*) correct; and the ways in which the presentation is (*iv*) clear and (*v*) convincing.
- *Con*: a third team member highlights the weaknesses of the article in any or all of the 5 areas mentioned above.
- *Decision*: a fourth team member plays the role of the editor, taking in all the information, deciding whether to publish or not, and explaining the reasons for their decision.

Grading the Critique: Each team will be graded based on the following scheme ...

- Clarity of each presentation 30 pts
- Information content in each talk 30 pts
- Understanding of individual roles 10 pts
- Overall team effort 10 pts
- Questions asked during other presentations 20 pts