ChE 260 W 2001 Term Paper

Assignment:

Prepare a critical review of a collection of related papers (minimum of 10) on a topic selected either from the list handed out in class or on a topic of your choosing (this must be approved by CWF). The review will be graded both for technical content and quality of writing (style, organization, format, mechanics).

Elements of a Critical Review:

Description of the motivation for the collected work:

- What is the current state of the science or technology?

Identification of the critical questions posed in the collection:

- Is the effort derivative or innovative?
- How will the effort extend knowledge?

Evaluation of the experimental approaches generally used:

- Are they appropriately selected?
- What are the sample constraints?

Consideration of the various analyses and interpretations:

- Are the assumptions clearly stated and appropriate?
- Are there errors in the mathematical treatments?
- Are there better, simpler analytical or numerical approaches?
- Are the arguments logically developed?
- What are the alternative interpretations of the data?
- Do authors agree, or are particular issues still under debate?

Assessment of future directions:

- Have all of the important questions been answered?
- What are the major obstacles to be overcome?
- What are the trends or directions of the research?