



第 10 回 HRC 研究報告会外部評価シート

開催 場所	アイアイランド (四条畷市)	開催 日時	平成 21 年 5 月 24 日 (日) 13:00-16:30
外部評価委員 所属・職・氏名		University of Southampton, School of Chemistry, UK Professor Geoffrey R. Luckhurst	

Overview

First, let me thank you for inviting me to participate in the Meeting of the HRC held at I&I Land on 24th May, 2009. This proved to be a stimulating occasion and my detailed discussions with many members of the four Research Groups have allowed me to assess the advances made since my last Report dated 1st June, 2008. My comments concerning the work of the Research Groups are given in the Assessment Form. As you will see I have concentrated on specific recommendations which should be read in the context of the descriptive comments in my previous Report.

However, here I want to make a few rather general comments, relevant for all Groups; these are in keeping with my closing comments at the Meeting.

- 1) It seems clear that the international language of science is English and so to ensure that the work of the Centre is widely recognised it is essential that those describing it, either in writing or verbally, should be fully conversant with English. To encourage this you may want to consider requiring all Master and Doctor Course students should attend and pass a course in English.
- 2) The three formal meetings of the HRC that take place every year are essential to ensure good communication between its members. However, there is much to be gained from more frequent and more informal meetings of members not only of the individual Research Groups but also between members of different Groups.
- 3) The quality of the research undertaken by members of the HRC is best evaluated by their peers in the respective areas of research. This, however, is not always possible especially as these are impressively broad and so a more formulaic approach might also be necessary. The approach should involve more than simply counting the number of papers each Research Group has published. In addition, the citation index of each paper should be given and updated on an annual basis. The impact factors of the international journals in which the papers are published should also be given. Of course, this assessment methodology does have its limitations but it would compliment the other ways that you have of judging the research quality.

I hope that these suggestions might prove useful to you and the other members of the HRC as well as its International Advisory Board.

Group 1 評価 : 界面制御分子膜グループ
<p>The impressive NMR methodology used to study the dynamic and static behaviour of nematic liquid crystals should be extended beyond the cyano-biphenyls currently investigated. The new materials could include fluorinated compounds, multicomponent mixtures and colloidal nematics.</p> <p>To facilitate this important extension to novel systems, likely with smaller, $\Delta\epsilon$, it would be beneficial, if not essential, to acquire a spectrometer with a reduced magnetic field strength.</p>
Group 2 評価 : 機能性光通信素子グループ
<p>The advantages of using a multiphoton rather than a single photon process for the reduction of Eu^{3+} to Eu^{2+}, for a pure system, needs to be clearly demonstrated.</p> <p>The relevance of investigating the photo-reduction process in solution to that in the solid phase, which may be of importance for optical memories, is not apparent and needs to be given.</p> <p>Collaboration with members of Group 3 on this project could prove beneficial to both.</p>
Group 3 評価 : 機能性光電デバイス
<p>The truly wide range of parameters in the doped zinc oxide systems, both the materials and their processing, demands that a logical theory-based approach be adopted to select the optimum mixtures and processing conditions rather than rely exclusively on an empirical strategy. This would be aided if the results obtained were interpreted theoretically at a deeper level</p>
Group 4 評価 : 光情報処理システム
<p>The use of electronic rather than paper questionnaires needs to be explored.</p> <p>The sample of people polled needs to be constructed carefully to ensure that it is representative of the population whose behaviour is being studied.</p> <p>Additional questions might be added, specifically designed, to test the consistency and validity of the replies.</p> <p>It might be of interest to determine the correlations between all of the attributes studied and not just between those that the model assumes to be related.</p> <p>Thought should be given as to the most appropriate statistical-analysis programme for this project.</p>

25/May/2009

Adviser's signature and date

Date 25/May/2009



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