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INVITED LECTURE - Nuclear and radiochemistry education in European Universities

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Within the EU project CINCH (Cooperation in education in nuclear chemistry) a survey on education of nuclear and radiochemistry (NRC) in European universities was produced by the University of Helsinki, Laboratory of Radiochemistry. Altogether 22 countries and 69 universities were covered by internet survey and by sending a questionnaire to appropriate departments. 42 universities, including most relevant institutions, replied to the questionnaire. The survey was mainly focused on teaching at the master's level which is the typical level of teaching. 83% of the universities give NRC teaching at the MSc level or both at MSc and BSc levels and 17% only at the BSc level. In addition, a number of universities have high quality doctoral programmes in NRC but have no or only limited teaching at lower levels. In general, the teaching programmes at various universities are very diverse.

Only a limited number of universities have specific MSc and BSc programmes for NRC. Only two universities (3% of surveyed universities) have a BSc programme and five universities (7%) an MSc programme. In addition to these, specialization in NRC within chemistry MSc programmes is possible in 25 universities (36%). However, in most of the universities (57%) only a few courses in NRC are taught under various MSc programmes. In the NRC master's programmes and in specializations (44 altogether) most (55%) universities focus on basic NRC while 20% of them focus in environmental radioactivity/radioecology, 16% in nuclear energy and materials and 9% in radiopharmaceutical chemistry.

Most of the courses given (57%) can be categorized to basic NRC which mainly covers basic nuclear physics as well as detection and measurement of radiation. In addition, 14% of the courses deal with environmental radioactivity and radioecology, 11% analytical radiochemistry, 7% nuclear energy and materials 7% radiopharmaceutical chemistry.

Both the survey report and the list of universities giving NRC education have been published at the CINCH home page http://cinch-project.eu/.

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