



Haldor Topsoe – Dalian National Laboratory for Clean Energy

Agreement on DNL –Topsøe Ph.D. Student Scholarship Program

Haldor Topsoe Beijing Co., Ltd., Subsidiary of Haldor Topsoe A/S, 2301, West Tower, Prosper Center, 5 Guanghua Road, Chaoyang District Beijing 100020, P. R. China, (hereinafter referred to as “Party A”), and Dalian National Laboratory for Clean Energy (abbreviated as DNL), 457 Zhongshan Road, Dalian, China, 116023, (hereinafter referred to as “Party B”), will establish DNL –Topsøe Ph.D. Student Scholarship Program (hereinafter referred to as “Scholarship”) to support the education of Party B, promote the collaboration between the two parties, inspire students to study hard and have spirits of creativity and assiduity in researching, and develop young talents and professionals in both fundamental and applied researches of heterogeneous catalysis and related materials for energy science and technology. Both parties herein named agree to the following stipulations after friendly discussions:

I Program Description

In order to strengthen the scientific and technological exchanges and cooperation in training high level talents between two parties, Applicants from DNL with great potential will be selected to qualify for the Scholarship Program. The program name is the DNL – Topsoe Ph.D. Student Scholarship Program.

Party A is “The Catalyst and Technology Company”. For more than 50 years, Party A has supplied the full range of catalysts required for production of ammonia, hydrogen, synthesis gas, methanol, formaldehyde, and sulphuric acid. Party A is one of the major catalyst manufacturers serving these industries worldwide. For the petroleum refining industry, Party A provides technology and a portfolio of catalysts for hydrocracking and hydroprocessing, contributing to the production of cleaner fuels meeting future environmental standards. Flue gas cleaning by removal of sulfur dioxide, nitrogen oxides, and other environmentally harmful compounds has for long been a key area for Party A, for applications ranging from heavy vehicles to large coal-fired power plants.

II Program Content

Party A intends to award 2 Ph.D. student scholarships each year from 2015. They will include:

- a grant of 3000 RMB per month
- participation in one international scientific conference of own choice with oral or poster contribution
- a 3 weeks trainee period at Haldor Topsoe A/S 's R&D facilities in Denmark

The grants continue until the Ph.D. thesis is completed, for a period of maximum 2 years. During the grant period, Party A will cover the fee of one international scientific conference. Party A will cover economy class fare, provide accommodation plus a net living allowance of 500 RMB per day during the conference trip and the traineeship at Party A's headquarters. The travel arrangements have to be made through Party A.

III Eligibility and Selection Criteria

To qualify for a Scholarship, the applicants must:

- be enrolled as a Ph.D. student at DNL and have completed at least half an academic year of the Ph.D. study and have at least one year of study remaining;
- work on a Ph.D. thesis within "Heterogeneous Catalysis and Related Materials for energy science and technology";
- be well educated in English, in order to get full benefit from the conference trip and the trainee period at Party A's R&D facilities in Denmark;
- study diligently, demonstrate exceptional ability and creativity in research;
- have good behavior with integrity, honesty, caring society and observance of laws;
- have good organization and coordination skills with team work spirit;
- be a citizen of the PRC.

IV Application Procedures

1. Selection Approach:

The Scholarship takes an “individual application, expert evaluation, better qualification” selection approach. All Ph.D. students who meet the eligibility and selection criteria can apply with required procedures.

2. Acceptance Methods of Application:

Being open, fair and equal, Party A will commission DNL office to give information on the program, review, accept the application materials, and then submit all the application materials to the review committee. Party A does not directly accept applications from individuals.

3. Application Materials:

List of documents to be submitted with the application:

(1) Application.

(2) Information about the applicant: the name and last name, home address, phone (home, office); mobile; fax; e-mail; the institution name and address; the name and last name of the Ph.D. Department manager, his (her) office phone; name and last name, degree of the scientific adviser, the office phone, fax, e-mail; the dates of the Ph.D. study start and termination.

(3) Summary of the Ph.D. work not more than three pages including the Ph.D.-student's name, the thesis title, the Institution name, the thesis content, the investigation purpose, scientific novelty, received results for the last year (for Ph.D.-students of the second and third years).

(4) Detailed study plan for one year including the Ph.D.-student's name, thesis title, institution name.

(5) Publication list.

(6) Supervisor recommendation.

All documents sent to the competition should be in English. The documents should be sent by e-mail and combined in one Word file.

V Review and Acceptance Methods

The winners of the Scholarship will be selected by a review committee, headed by the DNL Director and Dr. Henrik Topsøe (Chairman of the Board of Haldor Topsøe A/S and member of the DNL international advisory board). The winners will be selected on the basis of scientific merits and the eligibility and selection criteria. Should several of the applicants be rated equally by the committee, preference will be given to the applicants whose work is of most relevance to

Party A's business areas.

VI Conditions of the Scholarship award

- Every 6 (six) months from the formal award of the Scholarship, the student shall submit a two page intermediate summary report on the Ph.D. project in English to Party A.
- A summary of the student's final Ph.D. thesis in English or in Chinese shall be submitted to Party A, including a brief executive summary (maximum 2 pages) in English.
- All results generated by the student during the Ph.D. project shall belong to the student, and he/she shall be entitled to publish the results anytime at his/her discretion. Such publications shall include a note mentioning the Scholarship received from Haldor Topsøe A/S.
- A Party A representative shall have the right to visit the student at the research institute where the student is carrying out the Ph.D. project supported by Party A. The student shall upon Party A's request assist in arranging the visit, including discussions with his/her tutor.
- When the student has chosen the sponsored scientific conference to attend, he/she shall notify Party A as early as possible, in order to make the travel arrangements in a timely manner. The timing and subject of the trainee period at Haldor Topsoe A/S 's R&D facilities in Denmark will be agreed upon between the student and Party A. The cost of air tickets and hotel reservations not made through Party A will not be refunded.
- The student shall inform Party A immediately if he/she interrupts the work on the sponsored Ph.D. project for a period of two months or more. Party A may in such case decide to terminate the Scholarship.
- If the student changes the subject of his/her Ph.D. project substantially, the student shall immediately inform Party A. Party A shall have the right to terminate the Scholarship immediately, if the new subject is not within "Heterogeneous Catalysis and Related Materials for energy science and technology".
- Should the student not fulfill the conditions mentioned herein, Party A shall have the right to terminate the Scholarship.

This agreement shall become effective from 29 June 2015 ("Effective Date") when it has been signed by authorized representatives of both Parties and shall

expire without further notice 3 years from the Effective Date. Extension of the Scholarship Program and this Agreement shall be clarified between Party A and Party B at least 6 months before the expiration.

The revision of agreement or any additional issues that are not mentioned here will be resolved by discussion between Party A and Party B.

IN WITNESS WHEREOF, this Agreement shall come into effect immediately after it is signed by the representatives of the Parties hereto in duplicate, and either party hereto shall hold one copy.

Haldor Topsoe (Beijing) Co., Ltd

Dalian Institute of Chemical Physics

Jesper Wendt
Managing Director

Professor Can Li
Director of DNL

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Date

Date