

regards Croisés



newsletter number 2 - October 2005

École Centrale Paris



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27 % foreign students of Class 2008



Focus

Ecole Centrale of Beijing, the inauguration ceremony and the first day of term for the students



FOCUS

Ecoles Centrale, the conquest of China: the inauguration ceremony of Ecole Centrale of Beijing and the first day of term for the students

September, 16th, 2005, 1.00 p.m.: official inauguration ceremony of the Ecole Centrale of Beijing whose unfolding was done within the closing festivities of the year of France in China, in presence of M. Christian Poncelet, President of the Senate, representatives of Chinese and French authorities, M. Li Wei, President of the Beihang University and Ms. Nicole Bru, godmother of the first year of which the foundation is the main private partner.

250 people and 108 students of the first year have been invited. The band of Ecole Centrale Paris animated the festivities during this day.

An exceptional success ! The chinese students' representative closed its speech with these words: "And now, there is no time to waste, let's work !"...

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A front rank discovery for the EM2C laboratory

The Nano-optics and Nano-heat transfer team at EM2C laboratory has demonstrated **highly-directional thermal emission of light in the near infrared**. The thermal emitter is a microstructured tungsten surface.

This work was achieved during the PhD theses of M. **Laroche**, C. **Arnold** and F. **Marquier**, in cooperation with the laboratory of Photonics and Nanostructures at the CNRS-Marcoussis. It will appear in *Optics Letters* in October 2005. The heated tungsten surface emits infrared radiation with highly-directional lobes, which is a surprising result for thermal emission.

The angular aperture is only twice as large as that of a CO₂ laser. Applications are expected in thermophotovoltaics and drying.

► **Contact : Jean-Jacques Greffet**
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A common research project between Ecole Centrale Paris and the Faculty of Pharmacy of Châtenay-Malabry

A common research project ("*Materials of Pharmaceutical Interest*", team leader: N.E. Ghermani) is developed between the SPMS and PPB (UMR 8612 of the Faculty of Pharmacy, Châtenay-Malabry) laboratories.

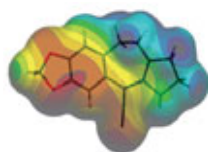
This strong collaboration has, for example, led to the explanation of the cephalotaxine unexpected reactivity - a putative intermediary in the total synthesis of an antileucemic agent: the homoharringtonine - observed by J. D'Angelo and F. Dumas from the BIOCIS (UMR 8076 of the Faculty of Pharmacy, Châtenay-Malabry) Laboratory. Indeed, thanks to high resolution diffraction measurement at low temperature and an appropriate data exploitation, we have determined the net atomic charges and the molecular electrostatic potential.

The original reactivity of this compound has been interpreted and predicted, leading our medicinal chemical colleagues **to imagine new synthesis routes for the antileucemic agent**. These results have been published in the "*Journal of Organic Chemistry*" of the *American Chemical Society*.

PIZZONERO M. et al, *J. Org. Chem.*, **2004**, 69, pp. 4336-4350

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Molecular electrostatic potential cartography









Micro/nano-scale composites

The reinforcement of polymers by the carbon nanotubes (CNT) to modify their mechanical, (di)electrical, optical et thermal properties is one of the possible applications. The safety of their manipulation is also a big concern.

The last development by the group "nanotubes et nanocomposites" of laboratory MSSMat combine the multi-scale reinforcements to make use of the different reinforcement effects and to activate the mechanisms at different scales: the NTC are grown on the micrometrical reinforcements.

This approach contributes to safety improvement and the performance of the resulting micro/nano composites : the whole material is less volatile, the dispersion easier. (*Advanced. Materials* **2004**, vol. 16, no. 22, pp. 2021-2024)

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Results of ECP 2005 entrance competitive examination

Class 2008 is composed of **438 students**, resulting from the various selections, including **320 French** and **118 Foreigners**.

French candidates:

Entrance Competitive examination: 314 coming in students (45 girls and 269 boys)

• MP (Maths & Physics)	133
• PC (Physics & Chemistry)	81
• PSI (Physics & Engineering)	85
• TSI (Technology & Engineering)	5
• PT (Physics & Technology)	10

Regional “classes préparatoires” (outside Paris) are distinct in MP and PSI, first rank of people coming in. 38 handicapped people have applied for two open places: 1 boy and 1 girl have passed and joined the Class 2008.

Parallel admission 1st year (Bachelor’s degree, 10 open places):

- 6 (1 girl and 6 boys)

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Creation of education departments

Ten departments of education were set up within the Education Office on September, 1st, in order to maintain the continuous progress of education in the three years of studies and the evolution of the educational offer in a perfect coherence with the Ecole Centrale’s project. The Education Office will be in charge of the administrative management of the teaching staff and their careers. In this manner, the teaching staff will reinforce its cohesion, and each one will be able to combine his or her personal and collective interests at the service of the School project.

Cross-cutting missions will also be identified, maintaining a profitable and necessary collaboration between the departments.

The ten departments are as follows:

- Mathematics
- Physics
- Mechanical – Civil Engineering
- Information Technologies – Electrical Engineering
- Process Engineering
- Energetics – Air – Space
- Human and Social Sciences
- Language and Culture
- Sports

4 months only after their implementation, the departments will draw up a state-of-the-art of the education in the three years of studies and an assessment of the available human resources. It’s a matter of establishing a better adaptation between the objectives of the project and the available means.

Teachers and students : together in an education progress approach

- The education evaluation by the students became widespread during the 2004 - 2005 school year. A real approach for progress is on, associating the teaching staff and the students, making them real actors of their own degree course. Since their creation, the departments have been in charge of this approach.

- Teaching quality indicators have been created on different criteria: content, teaching methods, quality of teaching media supports, evaluation of the students’ standard. In this manner, all these elements are part of the Education Office decision-making process.

- Moreover and still in this approach of continuous progress of teaching skills, the teachers get involved together in an exchange process of practical experiences, that has already given excellent results for the past few months.

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Foreign students of Class 2008

They greatly take part in the broadening of their French colleagues towards international horizons, creating a multinational and multicultural environment.

Class 2008 includes 118 foreign students of 27 nationalities (28 girls and 90 boys).

Competitive examinations

• Ecole Centrale	13
• Overseas contingents	8
• International cycle	5
• Parallel admission	1

T.I.M.E.* Double degree 63

Outside T.I.M.E.* Double Degree 28

Nationalities

• Germany, Belgium, Brazil, China, Morocco	from 10 to 20
• Spain, Italy, Tunisia	from 5 to 10
• Austria, Algeria, Cameroun, Canada, Chile, Greece, Czech Republic, Russia, Singapore, Sweden	from 2 to 5
• Andorra, Congo, Finland, Guinea, Hungary, Iran, Lebanon, Senegal, Vietnam	1

T.I.M.E.* : European Network, Top Industrial Managers for Europe
 Outside **T.I.M.E.*** : Network out of Europe : Brazil, Chile, Indonesia, People's Republic of China, Singapore

► Contact:

International relations:
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Club TIME PLUS:
club.timeplus@ecp.fr

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Ecole Centrale Paris, placed n°1 by the magazine *01 Informatique*

In partnership with the magazine *01 Informatique*, the survey institute IFOP made interviews with 500 human resources directors about the criteria they appreciate in the engineers schools and among their graduates: knowledge of the company world by the graduates, adequacy between technical training and general education, linguistic level, adaptability and autonomy. Among the 40 engineers schools which have been selected, **Ecole Centrale Paris has been placed n°1**. The school has received a **second award** on the criteria "best knowledge of the company world".

Welcome to the new partner companies of our Final year Areas of Concentration Industrial Partnership

We are happy to welcome: BNP PARIBAS – CARREFOUR – COLAS – EIFFAGE – FAURECIA – GUINTOLI – SERENSIA which join the 70 official partners of ECP.

Each of the 8 final year Area of Concentration is organizing its industrial partnership committee with the companies which will support it all along the coming school year. Introduction to the students, visits, lectures, projects and other actions started and will go on until the end of the school year.

The incoming students discover the industrial world

The Integration Cycle is part of the educational project of Ecole Centrale Paris. As soon as they arrive on the Campus, the incoming students will discover the industrial world and engineering professions.

Many thanks to the 30 companies which agreed to participate to the programme this year. They are: AIR LIQUIDE – ALCAN – BOUYGUES CONSTRUCTION – BPB PLACO – DALKIA – DASSAULT AVIATION – EADS ASTRIUM – EDF – ELIS – ELM LEBLANC – EURODIF – FAURECIA – GROUPEMENT DES MOUSQUETAIRES – GUINTOLI – LA REDOUTE – LAFARGE – OBERTHUR CARD SYSTEMS – PHILIPS France – PLASTIC OMNIUM – PSA – RATP – RENAULT – RENAULT TRUCKS – SAIPEM – SANOFI AVENTIS – SCHLUMBERGER – SNECMA – SUEZ ENVIRONNEMENT – THALES DIVISION AERONAUTIQUE – VALLOUREC.

In October, they will let a group of 12 students and 2 tutors visit one of their site. To make it optimum, the visit has been prepared at the school on September 21, together with the students and company representatives and evaluated later, on November 8, 2005.

First lecture of integration cycle: Carmen Munoz-Dormoy (ECP 92) and Hervé Biaisser, director of ECP



In a few words

■ 3 lectures during the Integration Cycle

Carmen Munoz-Dormoy (ECP 92) started on September 13.

On September 21, Daniel Grimm, Deputy Director of ECP, invited 5 young engineers (ECP 03): Elodie Magneron, Christine Pellen-Mansilla, Thomas Railhac, Benoît Tournebize, Matthieu Viala to talk over their studies at Centrale and their first professional experience.

On November 8, the Integration Cycle will be over with a lecture of Nicolas de Coignac (ECP 90), managing director OCTG Europe-VALLOUREC.

■ Club TIME PLUS

First meeting of the Club TIME Plus: on October 20, 2005 at 2 p.m. Actions for the coming school year will be prepared together with the company representatives members of the Club.

■ Forward your offers of training courses and jobs

YOUR TRAINING COURSES OFFERS

Operator training:

At least 6 weeks at the end of the 1st year

Internship Abroad:

At least 6 weeks at the end of the 2nd year

Final internship:

6 months at the end of the 3rd year (between april and November)

Contact:

The Office of the Training in Companies:
de-bfe-stages@ecp.fr

YOUR JOB OFFERS

Contact:

Association des Centraliens,
Service Carrières & Emploi
carrieres@centraliens.net

► **Contact: Industrial Partnership - 01 41 13 14 28 - sylvie.mazurat@ecp.fr**



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Minister of Higher Education and Research visited Ecole Centrale Paris

Graduate from Ecole Centrale Paris (76), François Goulard didn't hesitate, after being invited, to come to ECP, on September 7, meeting professors, researchers and many students. He was very pleased discussing issues such as specificity of the French "grandes écoles", the internationalization of the studies or importance of student associations.

The Minister visited the laboratory EM2C (Molecular Physics, Thermophysics and Combustion Laboratory) and the company Emulsar (incubator).

He met also the board of directors, Louis Gallois (SNCF), Marc Ventre (SNECMA), Jean-Yves Rossi (President of "Centraliens" Association), Françoise Gri (IBM), Guillaume Mainbourg (professor at ECP), Jean-François Dhainaut (President of the PARIS V University), Gabriel Ruget (Director of ENS ULM), Rachid Adda (Regional Council of Ile-de-France) and Philippe Laurent, mayor of Sceaux.

► **A special issue of *Regards Croisés* will be dedicate to this event.**



Welcome to Gilles Gleyze, who just joined the ECP management team, as director of development.

Former student from Ecole Normale Supérieure d'Ulm (Industrial History), and graduate from HEC, Gilles Gleyze spent more than 12 years working for companies: within the Mazars / Eurogroup consulting firm first, as a senior consultant in management; then for Rhône Poulenc / Rhodia as a marketing and sales director.

Today, Gilles Gleyze is bringing his business skills to the ECP; his mission is to broaden the links between the ECP and the ECP partner companies, by designing a full range of services focused on companies needs.

These services include of course the 3rd year partnership program; but it spans also innovative proposals to companies, like R&D services, Specialized Masters, Executive Training, Company Chairs and fund raising.

The objective of this offer of new services to companies is twofold: bring more value to our academic offer to the Centralien students (by increasing the interactions with the business world); but also increase the amount of our financial resources, in order to secure the Ecole future development.

Let's wish Gilles a full success in his new assignment.

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Integration weekend

The integration weekend took place at Port Leucat from the 9th till the 12th of September. In a convivial atmosphere, these days helped each student in discovering his/her future classmates, his/her tutor, some of the professors and the direction team in an informal manner. Fully organized by the students, this weekend is included in the integration cycle (forum, WEI, lectures, enterprises visits,...) which regulates the comeback of incoming students.

In a few words

■ The Renc'Arts festival

The Centrale Paris AdR (Association of the school Residents) organizes the Renc'Arts festival with, every year, a different culture highlighted. The 2005 edition, 20-22 September, was dedicated to the gipsy culture.

■ Centrale Entreprise Forum 2005

The Centrale Entreprise Forum 2005 will take place, November 22-23, from 9:00 a.m. till 6:00 p.m. on the Châtenay-Malabry campus.
Forum team – 01 41 13 15 15
<http://forum.ecp.fr>

■ Second edition of the Carrefour Centralien

This event, launched in 2004 within the framework of the 175th birthday of the School, is the gathering of the traditional End of studies ceremony with the venue of the Centraliens on the campus.
Schedule: visit of the School's laboratories, thematic lectures, meetings and closure dinner with the students of the 2005 and their parents.

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Ecoles Centrale, the conquest of China : the inauguration ceremony of Ecole Centrale of Beijing and the first day of term for the students

September, 5th, 2005, 8.00 a.m., first day of term: the 108 students of the first year from Ecole Centrale of Beijing, of which a third of girls, began their education at Beihang University.

This engineering school has been created in 16 months on the request of the Chinese Education Ministry with the assistance of the French Ministries of Education and Foreign Affairs, the honour committee of the year of France in China and the Foundation Nicole Bru.

The success of the recruitment exceeded all the hopes of the persons in charge of the project: the requests were numerous (for 10 places available for pekinese high-school pupils, 80 students from the two best high-schools of Beijing applied) and the level of applicants is excellent. This education is a real first opportunity for a sino-european partnership since it trains the students from their "Baccalauréat" (GaoKao) to their engineer diploma.



Ecole Centrale of Beijing is inaugurated !



The intensive 6-year training (3 years of "classes préparatoires" and 3 years of engineer studies) prepares high level engineers, polyvalent, trilingual (Chinese, English and French) who will have quickly high responsibilities in companies either in China or in France.

E. Craye (EC Lille), Nicole Bru (Nicole Bru Foundation) , H. Biauxser (Director of EC Paris), L. Vincent (EC Lyon), P. Chedmail (Director of EC Nantes), J. Vallat (Headmaster of Lycée Louis-Le-Grand), Li Wei (President of Beihang University)

The 108 students of the first year from Ecole Centrale of Beijing



Nicole Bru Foundation

The Nicole Bru Foundation was created in 2005 in order to perpetuate the name and memory of the founders of French pharmaceuticals company UPSA Laboratoires, represented today by Dr Nicole Bru.

Strongly committed to causes such as research for better pain treatment, the sheltering of young women subjected to sexual violence, and assistance to disabled children for example, Dr Bru has always been dedicated to carrying out as many projects of humanitarian and cultural scope as possible, in the entire world. Dr Bru has now decided to group all of her activities together, in the Nicole Bru Foundation.

The Nicole Bru Foundation is guided by an advisory board composed of leading figures in all domains: arts, culture, national heritage and the environment. When a project has been selected by the committee and therefore deemed worthy of the Foundation's help, Nicole Bru allots the Foundation with the necessary financial and operational needs for the project to move forward.

The first major project being undertaken under the aegis of the Nicole Bru Foundation is the creation of a branch of France's Ecole Centrale in Beijing. Nicole Bru is the main private partner in the school's opening, she has donated one million euros to the project.

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