



CHINA UNIVERSITY OF PETROLEUM

# NEWSLETTER

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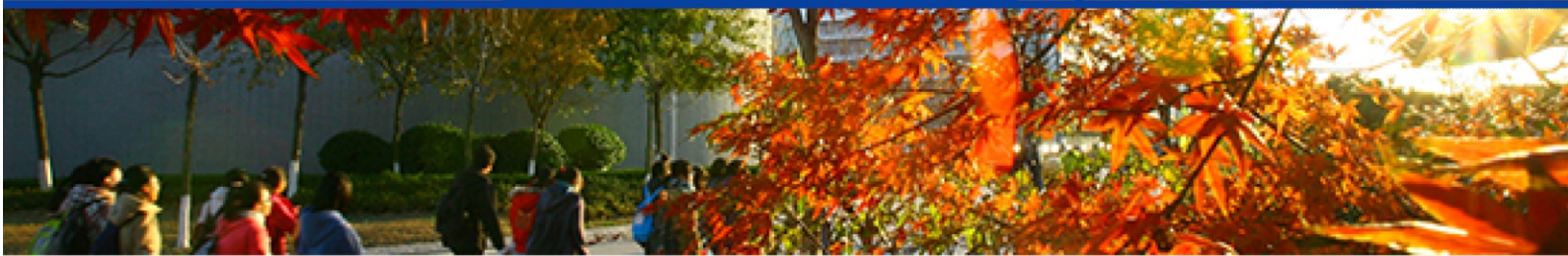


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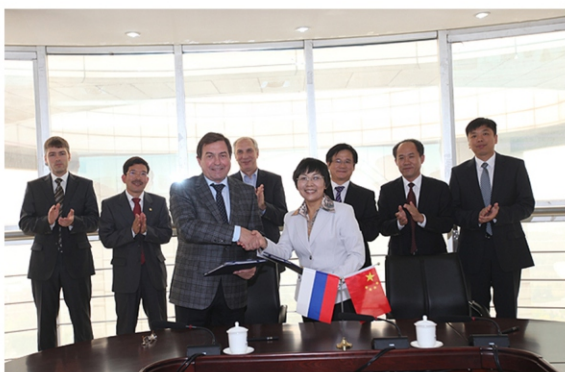
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## Partnership Strengthened with Russian and UAE Universities

On October 15, the delegation led by Полухин Олег Николаевич, the president of Belgorod National Research University (белгородский государственный национальный исследовательский университет), and the delegation led by Dr Thomas John Glas Hochstettler, the president of Petroleum Institute, UAE, paid visits to UPC. President Shan Honghong and vice-president Zha Ming, gave a warm welcome to the guests and held talks with them about further cooperation.



During Полухин Олег Николаевич's visit, the two sides signed an agreement on student and faculty exchanges, research cooperation

and joint academic conferences. President Shan generally introduced the characteristics and international education of the university in recent years and looked back on cooperation conducted between the two universities in the past decade.



UPC has signed agreements with Petroleum Institute, UAE in 2013. Since then, the summer school projects have been successfully held. So far, 30 students of UPC have participated in training programs of postgraduates of earth science, petroleum engineering, chemical engineering and electrical engineering. This year, the program will be launched in the middle November. The both sides will continue to conduct cooperation in terms of laboratory construction and scientific research programs in the future.



## UPC Enhanced Partnerships with Middle East institutes

Recently, President Shan Honghong took visits to research institutes in Saudi Arabia and United Arab Emirates and held discussions with their leaders about further cooperation.



*President Shan talked with Dr. Turki bin Saud bin Mohammad Al Saud*



*President Shan attended "The 3rd Saudi - Chinese Oil Refinery Forum"*

In Saudi Arabia, president Shan exchanged ideas with Dr. Turki bin Saud bin Mohammad Al Saud, president of KACST(King Abdulaziz City for Science and Technology). Finally, an agreement on establishing and launching the Chinese- Saudi Oil Refinery Research Center was reached. In addition, the two sides also attended the 3rd Chinese-Saudi Oil Refinery Forum jointly held by two universities which provided and focused on the most significant latest developments in oil refining and processes technologies.

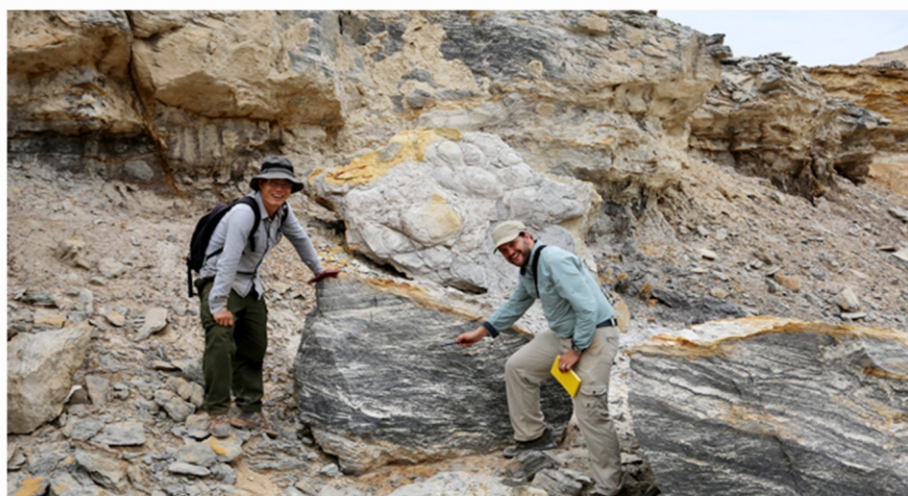
In the United Arab Emirates, President Shan held talks with Dr THOMAS JOHN GLAS HOCHSTETTLER, the president of PI, the Petroleum Institute. They exchanged ideas on the joint training of students. She also visited the postgraduates of UPC who are now studying in PI and encouraged them to be more hardworking.



## Research on Fault Sealing Behavior Reported by Earth-Science Reviews

Recently, research on fault sealing behavior by Pei Yangwen as the first and corresponding author, got reported by Earth-Science Reviews.

In the article, based on the previous research, Pei made the idea of "Multi-approach Fault Zone Architecture and Fault Seal Analysis" and gave an overall evaluation of fault sealing behavior from the points of the fault architecture, fault seal types, fault seal processes, fault seal analysis methodology, and controlling factors on hydrocarbon sealing behaviour.



See more about the article:

<http://www.sciencedirect.com/science/article/pii/S0012825215300210>

Covering a much wider field than the usual specialist journals, Earth Science Reviews publishes review articles dealing with all aspects of Earth Sciences, and is an important vehicle for allowing readers to see their particular interest related to the Earth Sciences as a whole. Our readership is more diverse than that of specialist journals: as well as research scientists, also students, government agencies involved in programme support and management and in environmental assessment and control, private industries concerned with planetary resources, and the independent consultant. The journal's vision includes ensuring accessibility for all of these groups.



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# Li Zili Got Awarded as the Outstanding Teacher by Shandong Province

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Li Zili, a professor from College of Pipeline and Civil Engineering, was awarded as 'the Outstanding Teacher' by Shandong Province.



As a professor and doctoral tutor, Li Zili has been mainly engaged in scientific research in the fields of oil-gas storage and transportation, corrosion theory and prevention technology, oil-gas recovery technology. He has taken charge of over 30 national projects and published more than 80 academic papers. Besides, he offers classes on oil-gas storage and transportation, and oil-gas recovery technology for both undergraduates and postgraduates.

The award of 'the Outstanding Teachers' by Shandong Province is founded to set a model for all teachers and encourage them to work harder and be more active in doing research and teaching.

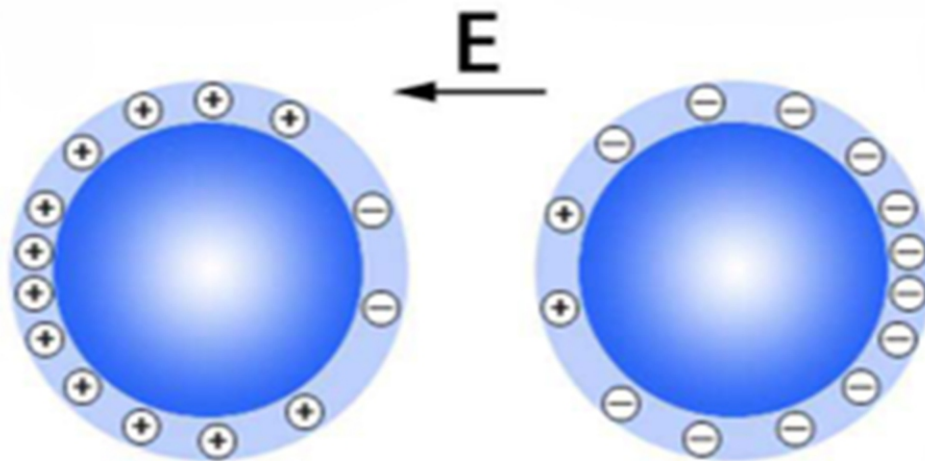


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# Zhang Yanzhen: Electric Field and Humidity Trigger Contact Electrification

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Recently, the research on 'Contact Electrification' by Ph.D. Zhang Yanzhen got published by Physical Review X. American Physical Society (APS) website also reported the finding.



Two identical insulators, despite having no free electrons, are able to charge one another upon contact. This process, called 'contact electrification', is important both in natural phenomena (like lightning near volcanic dust plumes) and in industrial applications (like laser printing). Based on experiments, Zhang and his partners have suggested that, in humid environments with strong electric fields (e.g., thunderstorms), the charge carriers are likely hydronium ( $\text{H}_3\text{O}^+$ ) and hydroxide ( $\text{OH}^-$ ) ions, driven by the electric field along water adsorbed on the surfaces of the insulators.

See more about the paper:

<http://journals.aps.org/prx/abstract/10.1103/PhysRevX.5.011002>

Physical Review X (PRX) launched by APS in 2011, is a highly selective, online-only journal. It mainly offers open access for key papers from basic, applied, and interdisciplinary physics. It is committed to disseminate innovative and impactful research advances to the broad science and engineering communities.



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# Zheng Jingtang's Group: Review on Electrical Discharge Plasma Technology for Wastewater Remediation

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Recently, according to the statistics of scientific papers by Institute of Scientific and Technical Information of China, the paper 'Review on Electrical Discharge Plasma Technology for Wastewater Remediation', published on the Chemical Engineering Journal, was listed as one of 100 most influential academic papers in China. It was written by Professor Zheng Jingtang's group from the National Key Laboratory of Heavy Oil, School of Chemical Engineering.

As wastewater remediation becomes a global concern, the development of innovative advanced oxidation processes for wastewater treatment is still a major challenge. With regard to its fast removal rate and environmental compatibility, plasma technology is considered as a promising remediation technology for water remediation. In the paper, various plasma reactors available for water remediation are addressed. Further on, detailed discussions are given of the effects of various factors on the performance of pulsed electrical plasma technology in water treatment processes. Finally, special attention is paid to the future challenges of plasma technology utilized for industrial wastewater treatment.

In order to enhance the influence of research achievements, Institute of Scientific and Technical Information of China has carried out "100 most influential international academic papers" since 2007. The evaluation is based on both qualitative and quantitative analysis, including innovation, the level of the journal, the pioneering, the role of Chinese authors in the collaborated papers, document type (article and review only) and reference (the average citation of article and review globally).



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# Water-column Reverberation: To Determine Focal Depth of Oceanic Earthquakes

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Recently, new findings on focal depth determination of oceanic earthquakes got published on Earth Planet. Sci.Lett. The paper presents the idea that water reverberations can be used to determine focal depth of oceanic earthquakes. The research has been co-completed by associate prof. Huang Jianping as the first author, from School of Geoscience, UPC and Niu Fenglin, Richard Gordon from Rice University.

The research develops a new technique for the accurate determination of the focal depth of oceanic earthquakes using water column reverberations recorded at teleseismic distances. Numerical tests suggest that the method is insensitive to the reference velocity model and can robustly recover the input focal depth of various types of earthquakes occurring at different depths inside oceanic lithosphere with an uncertainty less than 1 km. The technique is applied to the teleseismic records of two earthquakes that occurred east-southeast of the Tuamotu Archipelago on 10/15/1997 and 07/11/2004 with a PDE focal depth of 10 and 12 km, and the results have supported the authors' viewpoints. According to the paper, the Z-H grid search method offers greater precision and accuracy than most cases when the water reverberations are not used.

For more information about the paper:

<http://www.sciencedirect.com/science/article/pii/S0012821X15006275>

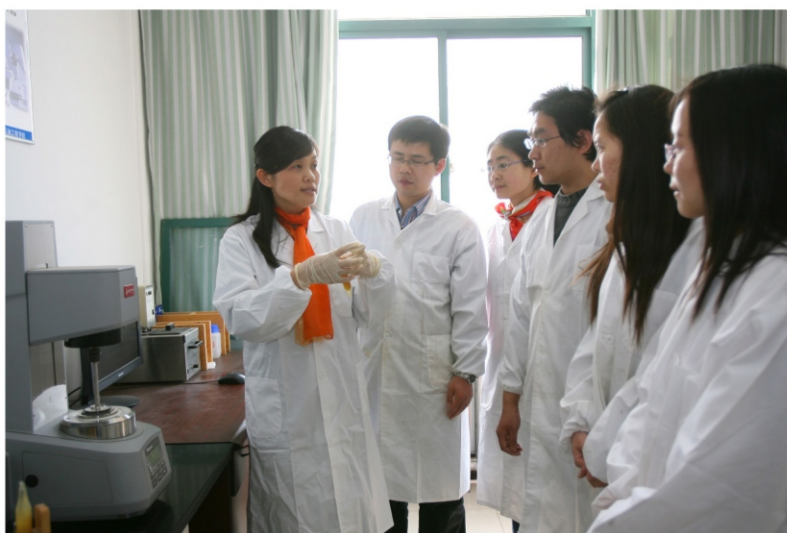


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## Prof. Dai Caili: Being Committed to Excellence in Research

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Dai Caili, the professor and PhD supervisor in School of Petroleum Engineering of UPC, has been awarded as 'the young and middle-aged expert with outstanding contributions' by the Ministry of Education recently and selected into the national New Century Talents Project. Over the years, she has concentrated her research on enhanced oil recovery and oil production chemistry. She has been engaged in researches such as chemical flooding, profile control and water shutoff, deep profile control and oil displacement technique, CBM extraction with increased production.



In recent five years, Prof. Dai has published over 80 papers, 37 of which were in SCI and 36 in EI. She has applied for 31 national invention patents as the first and second inventor, 20 of which has been authorized. Up to now, as the project leader, she has taken charge of about 40 projects ranging from NSFC, National 973 project, National 863 project, National major projects on oil and gas, PFDR to projects from three major oil companies.

Based on the national science and technology development plan and the requirement of economic and social development, the national New Century Talents Project was launched to give support to high-level young and middle-aged leading talents who focus on the forefront of science and technology.



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# Geofluid Discrimination: Poroelasticity and Seismic Reflection Inversion

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Recently, new findings on Geofluid Discrimination research have been made. The paper Geofluid Discrimination Incorporating Poroelasticity and Seismic Reflection Inversion has been covered by Surveys in Geophysics. The first author is Zong Zhaoyun, the lecturer of School of Geoscience.

Geofluid discrimination plays an important role in the fields of hydrogeology, geothermics, and exploration geophysics. A geofluid discrimination approach incorporating linearized poroelasticity theory and pre-stack seismic reflection inversion with Bayesian inference is proposed in this study to identify the types of geofluid underground.....A novel linearized P-wave reflectivity equation coupling the fluid modulus is derived to avoid the complicated nonlinear relationship between the fluid modulus and seismic data. Convoluting this linearized P-wave reflectivity equation with seismic wavelets as the forward solver, a pragmatic pre-stack Bayesian seismic inversion method is presented to estimate the fluid modulus directly. The preconditioned conjugate gradient method is coupled in the optimization of the objective function to weaken the strong degree of correlation among the four model parameters and enhance the stability of those parameter estimations simultaneously. The synthetic examples demonstrate the feasibility and stability of the proposed novel seismic coefficient equation and inversion approach. The real data set illustrates the efficiency and success of the proposed approach in differentiating the geofluid filled reservoirs. (from the abstract of the paper)

Surveys in Geophysics was issued in 1973, mainly publishes articles on physical, chemical and biological processes occurring within the Earth, on its surface, in its atmosphere and in the near-Earth space environment, including relations with other bodies in the solar system. Its papers have high impact and recognition in the field of geoscience.



# Chen Zhonghong: Geological Research Award from Geological Society of China

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Recently, the result of the 15th Youth Geological Science and Technology Prizes hosted by Geological Society of China, was announced. Chen Zhonghong, the associate professor from School of Geoscience of UPC, was awarded the Silver Hammer Award.



Chen Zhonghong now also works as a member of AAPG and EMD. As a project leader, he has presided over 3 NSFC projects and 2 Provincial Natural Science Fund projects and participated in national key scientific and technological projects. What's more, he has completed two books, *Basic Fluid and Hydrocarbon Accumulation* (Science Press) and *Mechanisms and Models of Hydrocarbon Expulsion Lacustrine Faulted-Basin* (China University of Petroleum Press) and finished four works such as *Advances In Petroleum Engineering* (Stadium Press LLC, USA) with others. In addition, over 50 papers as the first writer in *Journal of Asian Earth Sciences* and *Scientia Sinica Terrae* have been published and over 20 papers are included in SCI and EI. 10 patents are authorized.

The Youth Geological Science and Technology Prize, set up in 1989 and hosted once two years, is the highest prize for young man working in the field of geology, which aims to honor young geosciences workers who make outstanding contributions to geological science and technology.



## The Fifth PrimeStar Petroleum Science & Technology Innovation Forum for National College Student Held in UPC

On December 5 to 6, The Fifth PrimeStar Petroleum Science & Technology Innovation Forum for National College Student was held in UPC. It attracted a number of graduates and postgraduates from 16 petroleum universities and institutes, such as Peking University, China University of Geosciences, China University of Petroleum (Beijing).



Responding to the national call of 'entrepreneurship and technology innovation', the forum was aimed to enhance innovation capacity of college students and inspire their research interests on petroleum science and technologies. There were seven sub-forums on oil and gas field development engineering, drilling and completion engineering, offshore oil engineering, petroleum geology and exploration, oil-gas storage and transportation, refining and petroleum machinery. What's more, over 300 academic papers were received, 58 seminars on excellent works and 1 lecture were offered.

By attending the forum, college students can improve their practical ability and teamwork spirit, and fix attention on industry development and global energy strategies which will help them to make greater contribution to the oil industry and social development in the future.



# Campus Life

## 2015 Opening Ceremony Held

On Sept. 9th, the opening ceremony for 2015 freshmen was held in the gymnasium. The university leaders, student and teacher representatives and the freshmen attended the ceremony.



*More than 6,700 new students will study in UPC in the next four years.*



*President Shan Honghong delivered a speech and encouraged the freshmen to have a meaningful college life.*



*The symphony concert was offered for the freshmen.*



# UPC Held the Commendation Meeting to Celebrate the Teacher's Day

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Teacher's day comes on Sept. 10 every year. This year, UPC held the commendation meeting to give honor to teachers for the outstanding contributions they have made to the university and students.



President Shan Honghong gave a speech on how to be a good teacher. She gave thanks and wishes to all the teachers and also encouraged them to be more hardworking and energetic. As she said, a good teacher should be virtuous, determined, devoted and kind-hearted.



*Teachers are receiving their awards from the leaders of the university*

# Huicui College Officially Launched

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Recently, UPC officially launched Huicui College to carry forward the elite education of UPC. Liu Huadong, vice-president, Feng Qihong, the dean of Huicui College and student representatives attended the inaugurating ceremony.



Huicui College is set up for outstanding students who will receive a different education here. It has the science class and art class and will adopt the small-class teaching to give students a more specific training. Vice president Liu Huadong showed his congratulations to the establishment of Huicui College. As he said, the college will perform the core task of the university to cultivate specialized talents and be built into a model of elite education which focus on both fundamental and specialized sides.



## The 4th Conference of the Chinese Association for ESP (English for Specific Purposes) Held in UPC

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Recently, The 4th International Conference of the Chinese Association for ESP & The 7th International Conference on ESP in Asia was held in UPC. It focused on the theme of 'ESP in Asia: Retrospect and Prospect'.



More than 200 experts and young scholars from universities at home and abroad participated to discuss teaching and research of ESP in respond to the challenges educational internationalization and economic globalization have brought to English teaching. On the conference, Brain Paltridge from University of Sydney, Sun Yilin from South Seattle Community College, Doreen Wu from Hong Kong Polytechnic University and John Flowerdew from City University of Hong Kong made reports respectively on the themes of 'Context and the researching and teaching of academic writing', 'ESP in the 21st Century-An NNES Professional's Perspective', 'Towards an Integrated Perspective of Developing, Curriculum for Bilingual Corporate Communication' and 'The Hong Kong Experience and John Swales's approach to pedagogy in Genre Analysis: A perspective from 25 years on'.

Besides, broad consensus was also reached on related topics such as ESP curriculum design, ESP theory development and application, ESP teaching methods, ESP and cross-cultural communication.

# To Be A Better Me: Challenge, Devotion and Teamwork-What Can Be Learned from PetroBowl Championship

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Recently, 2015 PetroBowl Championship finally was held in Houston in which thirty-six teams around the world competed for the trophy. The team from UPC, consisting of five students, Li Menglai, Gong Zhiwu, Zhang Wei, Osama Ajaz and Ma Bo, got qualified from Asian Pacific Region through the Regional Qualifier Competition. They all learned a lot from the experience which has gave them a chance to cooperate with teammates and be against with competitors.



## Li Menglai: Confidence and Teamwork

There are two things that I learned from the PetroBowl and would like to share with others. The first is a much clearer awareness of our position in the world, or in general, confidence. Some people hold the view that the PetroBowl Championship is a “mission impossible”. However, after having been really part of the PetroBowl, I feel that it is “difficult” instead of “impossible”. Second, I want to lay an emphasis on the teamwork and sincerely thank for all my teammates, everyone that joined in the PetroBowl training program this year, and all the teachers who care and support our activity. PetroBowl is really a time-consuming event and requires a long-term preparation with learning materials of an extremely wide range. Everyone must accomplish his assigned tasks and it requires a sense of responsibility. What made me very moved and grateful is that every teammate of mine volunteered to cover for others for many times when someone encountered a tight schedule although everyone was indeed heavy-loaded. I think a real team is a group of people that proactively work for the best, instead simply working together. I am thankful for having a real team.



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## **Zhang Wei: A Chance to be improved**

Under the leadership of Ms. Zhao, we came to Houston with expectation and tension. During the game we adjusted our mood, thus we were confident and active to strive for each toss up, and this was a major improvement of our team compared to last year. We will continue to expand our learning material range for PetroBowl, and try to have more solid understanding of the knowledge so that we won't hesitate in the game. At the same time, we should select more young talents in our school to participate in our preparation process.

## **Gong Zhiwu: Language Proficiency, Friendship**

The 2015 PetroBowl Championship has come to the end. I have experienced and gained a lot from it. I have obviously felt the enhancement of my English proficiency, including the vocabularies and writing. Teammates communicated with each other in English all the time, which helps us improve the English listening and speaking skills. The most significant thing I have obtained from PetroBowl is friendship. Mrs Zhao Xiaoke, like an elder sister, have accompanied us in the whole process, concerning and encouraging us, which impressed me a lot. In a word, the PetroBowl road will be a happy memory.



## **Osama Ajaz: Devotion, Determination and A Long Run**

In the beginning and very first training session for SPE PetroBowl team selection of the university, I was afraid of my placement as one of team member due to high density of competitors that might be more technically sound than me but I observed and believed that this game was not about competition only but also about devotion, determination and a long run. We worked hard and tried our best to make realize all teams from different regions that our region has also players that are technically

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sound in petroleum engineering. Every competition ends with either, a victory or a lesson. So, it was our time to learn lesson, to achieve our goal in future. In great attempts, it's glorious even to lose. Every Winner is a loser in the beginning, so we need to review our plan to design it better rather than delay a goal because great things take time to execute.

### **Ma Bo: Communication and Cultural Experience**

After 3 times with my teammates going aboard to attend the petrobowl competition, I sincerely feel that this competition is not only a competition which make us know almost all the academic and non-academic knowledge of petroleum industry in a short time , but also a platform for students in petroleum backgrounds all over the world to communication about the cultural difference and improvement of industry with each other Moreover, as the member of SPE Student Chapter ,we hope we can organize more academic , meaningful and interesting activities to attract more students to benefit from this organization.

PetroBowl Competition is an international petroleum engineering knowledge quiz, which has been successfully held for fourteen times so far. It mainly covers technical and non-technical aspects of the oil and gas industry, such as the petroleum engineering, petroleum geology, history of the oil industry, oil current events and so on. As a platform for communicating and exchanging within global SPE Student Chapter, it attracts more and more students who are more devoted and determined.



# Members from CUPE SPE Student Chapter Attended SPE Northern China International Section Monthly Meeting

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During Oct. 22th to 23th, 2015, the four representatives of Third Presidium of CUPE SPE Student Chapter was invited to attend the SPE Northern China International Section Monthly Meeting in Beijing.



In the evening of October 22th, representatives attended the Monthly Meeting organized by SPE Northern China International (NCI) Section, representatives from CNOOC, ROC, Chevron and ConocoPhillips China, discussed how to face to the challenges under the circumstances of low oil prize and possible solutions.

Afterward, the representative also visited the SPE Student Chapters of Peking University, China University of Petroleum (Beijing) and China University of Geosciences (Beijing). They exchanged ideas about the self-development of the organization, academic contests, interconnections between universities, culture development and characteristic events in order to establish a long-term corporation to achieve share of information and mutual development.

CUPE SPE Student Chapter was founded on April 29th, 2013. In the last 2 years, CUPE SPE Student Chapter was titled as the Gold Standard SPE Student Chapter. Furthermore, core members were elected to attend the PetroBowl Championship for 2 years in a row and were also awarded the Runner-up (2nd place) in SPE 2015 PetroBowl Asia Pacific Regional Qualifier and winner of the 6th International Student Petroleum Congress & Career Expo Paper Contest. Aimed at developing into an international academic student organization, CUPE SPE Student Chapter is intended to work as a window for international academic communication, an educational base for innovative individuals.

# 2016 New Year Party and Scholarship Awards Ceremony for International Students Held

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On Dec. 24, 2016 New Year Party and Scholarship Awards Ceremony for International Students was held. More than 500 international students and faculties in College of International Education participated the party and celebrated the coming of the new year together.

Colorful performances were offered by International and Chinese students, such as modern dance, Waltz, Peking Opera, Beat Box, original and pop songs, fitness show. With friends and classmates, they expressed best wishes for the New Year and showed their love to the big family.

During the get-together, the scholarship awards ceremony was held to give honor to outstanding students and encourage them to be better.





# 2015 Graduation Ceremony for International Students Held

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On Dec. 30, 2015 Graduation Ceremony for International Students was Held. 58 international students from 16 countries received their degrees from President Shan Honghong.



On behalf of graduates, Li Zhengying, a student from South Korea gave a speech, shared her experience in the university and expressed her thanks to all teachers and friends. Yang Yongfei, the teacher representative, gave best wishes to all the graduates and hoped them to work hard in the future and make contribution to the friendship between China and their countries.

So far, more than 1200 international students are studying in UPC with 980 degree students. Here, they study specialized knowledge, and learn Chinese and its culture. It must be a great experience to study in the university and in China.





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