



中国石油大学
CHINA UNIVERSITY OF PETROLEUM



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA



中澳非常规天然气论坛暨展览

China-Australia Unconventional Natural Gas Forum & Exhibition

会议手册

CONFERENCE MANUAL

7-9 Nov 2016 Beijing, China

主办单位：

中国石油大学（北京）

China University of Petroleum - Beijing

昆士兰大学

University of Queensland

澳大利亚石油勘探学会

Petroleum Exploration Society of Australia

澳大利亚商会

Australian Trade and Investment Commission

中国煤层气产业技术创新战略联盟

National Technology Innovation Strategy Alliance on Coalbed Methane Industry

一、安全须知(Safety Tips)

为了保证您和他人会议期间的健康与安全，请您注意以下有关事项：

1. 会场安全

- (1) 请首先熟悉会场安全出口和疏散通道；
- (2) 与会人员众多，进出会场时注意安全，互相谦让，有序出入，避免发生拥挤、推搡、踩踏等事故；
- (3) 如有突发情况，请按照工作人员的指挥，有序疏散。

2. 消防安全

- (1) 请勿在会场及其他禁烟区吸烟；
- (2) 请勿将易燃易爆物品带入会场。

3. 用电安全

当您需要连接临时电源线路或使用大功率用电设备时，请与工作人员联系。

In order to ensure the health and safety of you and others during the meeting, please note the followings:

1. Venue Security

- (1) Please be familiar with the venue safe exit and evacuation routes;
- (2) Ordered in and out, to avoid congestion, pushing, stampede and other accidents;
- (3) If there is a sudden situation, please follow the command of the staff, orderly evacuation.

2. Fire Safety

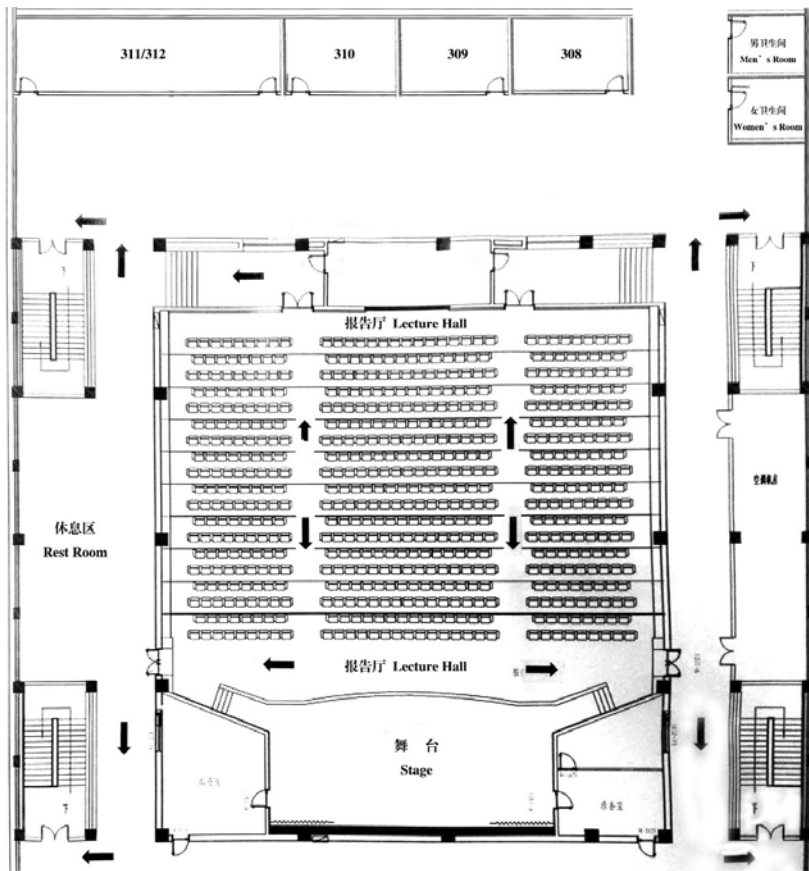
- (1) Please do not smoke in the meeting room and other non-smoking areas;
- (2) Do not bring flammable and explosive materials into the venue.

3. Electrical Safety

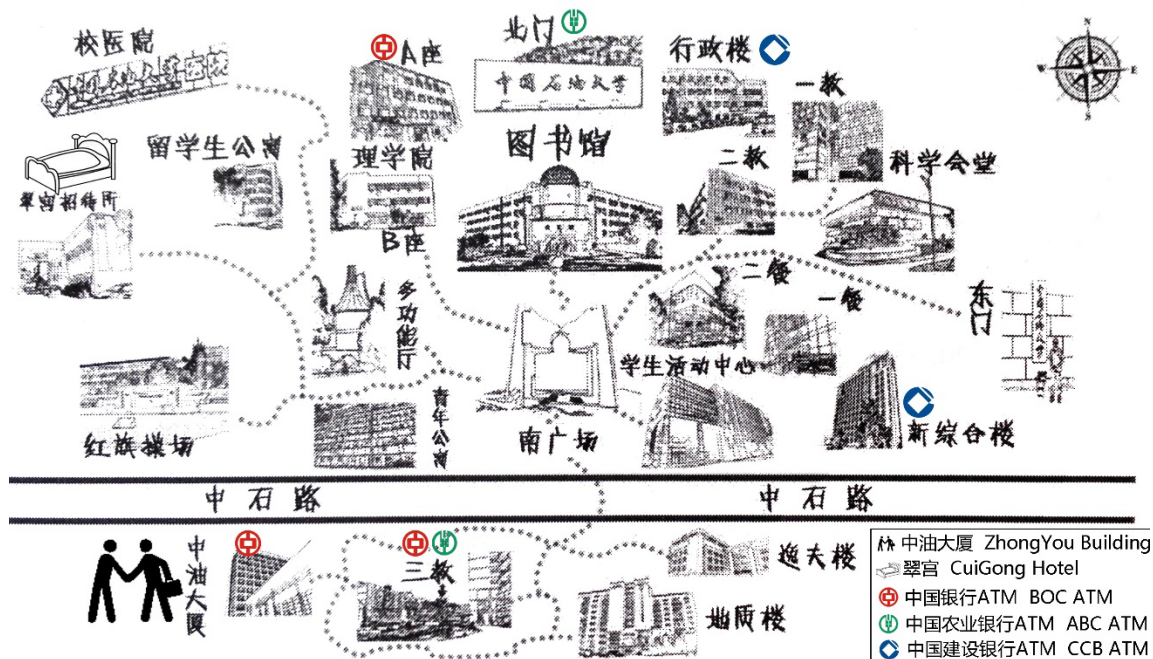
When you need to connect a temporary power line or use a large power electrical equipment, please contact the staff.

中油大厦三楼安全疏散图

Safety evacuation map on the third floor of ZhongYou Building



校内位置图(Campus Map)



二、参会指南(Meeting Guide)

1. 注意事项(Attentions)

(1) 请按照日程安排，准时出席会议和参加相关活动；

Please be present at the symposium and attend relevant activities on time;

(2) 会场内，请关闭手机或调至震动状态；

Please ensure that your mobile phone is always silent at the Conference hall;

(3) 出席会议、参加相关活动时请佩戴代表证；

Please wear your delegate card when you are present at the symposium, attend relevant activities;

(4) 请注意保管好现金、证件等贵重物品；

Please take good care of your money, identity card, etc ;

(5) 其他未尽事宜请找工作人员。

Please feel free to ask for any help from our staff.

2. 联系信息(Organizers)

相关事宜	总负责	宣传组	住宿组	接待组
负责人	宋丽娜	付强	马雄强	王洪利
联系方式	13810308724	13051029119	18811170938	15210870454
相关事宜	餐饮组	会务组	秘书处	机动组
负责人	付康	王飞	刘欣佳	孙延明
联系方式	13720283531	13126695255	18809130649	13261980923

Teams	Director	Propaganda	Accommodation	Reception
Team leaders	Lina Song	Qiang Fu	Xiongqiang Ma	Hongli Wang
Tele	13810308724	13051029119	18811170938	15210870454
Teams	Caterer	Conference	Secretariat	Reserve
Team leaders	Kang Fu	Fei Wang	Xinjia Liu	Yanming Sun
Tele	13720283531	13126695255	18809130649	13261980923

三、日程安排(Schedule)

11月6日(星期日)						
全天	注册				翠宫宾馆	
11月7日(星期一)						
开幕式						
8:00-8:20	致开幕词	Prof Andrew Garnett	教授, 昆士兰大学煤层气中心主任	主持人: Andrew Garnett +王星锦	中油大厦 三楼报告厅	
8:20-8:40	中国石油大学(北京)领导致辞					
专题报告1: 产业发展						
8:40-9:05	中国煤层气产业现状与发展趋势	孙茂远	研究员, 国家能源专家委员会委员, 原中联煤层气有限责任公司董事长	主持人: Andrew Garnett +李相方	中油大厦 三楼报告厅	
9:05-9:30	Project of coalbed methane production in Russian Federation. State-of-the-art summary.	Mr. Stanislav Zolotykh	俄罗斯联邦俄罗斯天然气工业股份公司库兹涅茨有限责任公司董事长			
9:30-10:00	茶歇					
10:00-10:25	煤矿区煤层气地面抽采全覆盖	王保玉	教授级高工, 山西蓝焰煤层气集团有限责任公司董事长			
10:25-10:50	我国高煤阶煤层气开发中存在的问题及解决对策	朱庆忠	教授级高工, 中国石油华北油田分公司总经理助理兼华北油田分公司煤层气事业部总经理			

10:50-11:15	Ensuring the long-term value of the APLNG CSG to LNG project	Mr. Chris White	澳大利亚 Origin Energy 公司集团经理		
11:15-11:40	煤层气一体化模拟技术	夏朝晖	教授级高工，中国石油勘探开发研究院亚太所副所长		
11:40-12:05	Unconventional gas in eastern Australia – Where next?	Mr Tor McCaul	澳大利亚 Comet Ridge Limited 公司总经理		
12:05-13:00	午餐				
9:00-17:00	澳大利亚非常规天然气区块展览				中油大厦 一楼大厅
专题报告 2: 地质理论					
13:00-13:30	Frontier Investigation of CBM Geology in China	秦勇	教授，中国矿业大学副校长	主持人: Steve Tyson +王保玉	中油大厦 三楼报告厅
13:30-14:00	Polynomial chaos expansion modelling for the quantification of uncertainty	Assoc Prof Diane Donovan	副教授，昆士兰大学数学物理学院		
14:00-14:30	Multi-scale multiphase multiphysics geocomputing and its application in coal seam gas development	Huilin Xing	昆士兰大学地球科学学院，地学计算中心		
14:30-15:00	茶歇				
专题报告 3:开发与数模					
15:00-15:30	煤矿区碎软低渗煤层的煤层气顶板岩层水平井分段压裂开发技术及工程实践	张群	研究员，中煤科工西安研究院副院长	主持人: Brian Towler +朱庆忠	中油大厦 三楼报告厅
15:30-16:00	Micro-scale characterisation of coal seams: CT-imaging and cleat reconstruction	Dr Peyman Mostaghimi	讲师，新南威尔士大学		

16:00-16:30	煤层气 SIS 水平井产能主控因素综合分析	段利江	博士，中国石油勘探开发研究院亚太研究所		
16:30-17:00	Characterisation of creep in coal and its impact on permeability: An xperimental study	Dr Zhongwei Chen	昆士兰大学机械与采矿学院		
18:00-20:30	晚宴			学生活动中心 410	
11月8日(星期二)					
专题报告 4:钻井与改造					
8:00-8:25		John Hattner & Nathan Shahan	荷兰 Sewell & Associated 油气咨询公司石油顾问	主持人: James Underschultz+ 吴建光	中油大厦 三楼报告厅
8:25-8:50	煤层气水平井钻井与压裂关键技术	杨陆武	博士，北京奥瑞安能源技术开发有限公司董事长		
8:50-9:15	煤层气采出水配制清洁压裂液的研究与应用	刘萍	副研究员，中国石油勘探开发研究院廊坊分院压裂酸化技术服务中心		
9:15-9:40	Petroleum Engineering Research of CSG	Prof Brian Towler	昆士兰大学石油工程的首席教授		
9:40-10:05	中国煤层气开发压裂新思路及新技术	卢修峰	河北唐琪科技有限公司总经理兼中石油集团工程院高级技术顾问		
10:05-10:30	茶歇				
专题报告 5 : 排采与环境					
10:30-10:55	煤层气井产出水综合处理理论与技术	琚宜文	教授，中国科学院大学	主持人: Enkhsaruul BYAMBAJAV	中油大厦 三楼报告厅
10:55-11:20	Using hydrocarbon system analysis to	Prof James	教授，昆士兰大学流体力学负责人		

	evaluate seal transmissivity	Underschultz		+	刘贻军
11:20-11:45	煤层气规模开发成功案例分析	叶建平	教授级高工, 中国海洋石油有限公司勘探部非常规油气勘探管理处处长		
11:45-12:10	Outlook for M & A in the Australian Energy Market	James Zhang	Herbert Smith Freehill		
12:10-13:30	午餐				
澳大利亚非常规天然气区块介绍					
13:30-17:00	澳大利亚相关公司领导发言				中油大厦 三楼报告厅
13:30-17:30	昆士兰大学教授会见中国学生				逸夫楼 101
13:30-17:30	参观 SGS 瑞华通正非常规油气技术检测实验室				实验室
9:00-17:00	澳大利亚非常规天然气区块展览				中油大厦 一楼大厅
11月9日 (星期三)					
研究生座谈主题发言					
8:00-8:30	New reservoir simulation research program for unconventional onshore gas at UQ	Professor Suzanne Hurter	昆士兰大学煤层气中心	Chairs: Prof Brian Towler+ 张遂安	中油大厦 三楼报告厅 310
8:30-9:00	Unconventional geostatistics for unconventional reservoirs	Professor Steve Tyson	昆士兰大学煤层气中心		
学生主题演讲					

9:00-9:20	The effect of coal wettability on bubble-water flow in coal seam cleats at pore-scale	Jie Yi	昆士兰大学地球科学学院博士	Chairs: Prof Brian Towler+ 张遂安	中油大厦 310 会议室
9:20-9:40	页岩凝析气藏分段压裂水平井产能预测研究与应用	王洪利	中国石油大学（北京）油气田开发专业博士		
9:40-10:00	Swell/shrink behaviour of coal in solvents/oxidants for increasing coal seam permeability	Zhenhua Jing	昆士兰大学化学工程学院博士		
10:00-10:30	茶歇				
10:30-10:50	致密砂岩支撑裂缝长期导流能力影响因素实验研究	肖凤朝	中国石油大学（北京）油气田开发专业硕士		
10:50-11:10	A packed bed methodology to study the effect of coal surface wettability on relative permeability using a steady-state core flooding apparatus	Fabio Terzini Soares	昆士兰大学化学工程学院博士		
11:10-11:30	煤层气储层伤害研究进展	刘皓	中国石油大学（北京）油气田开发专业硕士		
11:30-11:50	Dimensional analysis and prediction of coal fines generation under two-phase flow conditions	Tianhang Bai	昆士兰大学机械与采矿学院博士		
11:50-12:10	Pulsed Arc Electrohydraulic Discharge (PAED) – a novel stimulation method for gas development from coal seam interburden	Fei Ren	昆士兰大学化学工程学院博士		

Nov 6 (Sunday)

Full day	Registration	CuiGong Hotel
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Nov 7 (Monday)

Opening Plenary

8:00-8:20	Official Opening Address	Prof Andrew Garnett	Director of the UQ, Centre for Coal Seam Gas	Chairs: Prof Andrew Garnett+ Prof Wang Xingjin	Lecture hall, 3 rd floor, ZhongYou Building
8:20-8:40	Representatives from CUPB				

Session 1: Industry Development

8:40-9:05	The current situation for development of coalbed methane industry in China	Prof Maoyuan Sun	Member of Expert Consultative Committee of National Energy Commission/Formers President of China United Coalbed Methane Co., Ltd	Chairs: Prof Andrew Garnett+ Prof Xiangfang Li	Lecture hall, 3 rd floor, ZhongYou Building
9:05-9:30	Coalbed methane production project in the Russian Federation. A State-of-the-art summary.	Mr. Stanislav Zolotykh	General Director of Gazprom Dobycha Kuznesk LLC, Russia Federal		
9:30-10:00	Tea Break				
10:00-10:25	Full coverage of coal seam gas ground extraction in coal- mining areas	Prof Baoyu Wang	President of ShanXi Lanyan Coalbed Methane Group Co., Ltd		
10:25-10:50	The issues and corresponding solutions for high-rank coal seam gas development in China	Prof Qingzhong Zhu	General Manager of Coalbed Methane Business Unit, Huabei Oilfield Company of China National Petroleum Corporation		

10:50-11:15	Ensuring the long-term value of the APLNG CSG to LNG project	Mr Chris White	General Manager, Field Development Optimisation, Origin Energy		
11:15-11:40	The integration simulation technique for coal seam gas development	Dr. Zhaohui Xia	Vice leader of Asia-Pacific Group, Research Institute of Petroleum Exploration & Development		
11:40-12:05	Unconventional gas in eastern Australia – Where next?	Mr Tor McCaul	Managing Director, Comet Ridge Limited		
12:05-13:00	Lunch				
9:00-17:00	Exhibition				1 st floor, ZhongYou Building
Session 2: Coal Geology and Reservoir Characterization					
13:00-13:30	Frontier Investigation of CBM Geology in China	Prof Yong Qin	Vice President of China University of Mining and Technology	Chairs: Prof Steve Tyson + Prof Baoyu Wang	Lecture hall, 3 rd floor, ZhongYou Building
13:30-14:00	Polynomial chaos expansion modelling for the quantification of uncertainty	Assoc Prof Diane Donovan	The University of Queensland, School of Mathematics & Physics		
14:00-14:30	Multi-scale multiphase multiphysics geocomputing and its application in coal seam gas development	Dr Huilin Xing	The University of Queensland, school of earth sciences, Centre for geosciences computing		
14:30-15:00	Tea Break				
Session 3: Small Scale Reservoir Processes and Reservoir Stimulation					
15:00-15:30	Horizontal well staged fracturing development and engineering practice for the roof rock layer in fragile, malleable and low permeability coal	Prof Qun Zhang	Vice President of China Coal Technology & Engineering Group XI'AN Research Institute	Chairs: Prof Suzanne Hurter + Prof Qingzhong Zhu	Lecture hall, 3 rd floor, ZhongYou Building

	mining areas				
15:30-16:00	Micro-scale characterisation of coal seams: CT-imaging and cleat reconstruction	Dr Peyman Mostaghimi	The University of New South Wales		
16:00-16:30	A comprehensive analysis regarding the main controlling factor for CBM SIS horizontal well productivity	Dr Lijiang Duan	Asia-Pacific Group, Research Institute of Petroleum Exploration & Development		
16:30-17:00	Characterisation of creep in coal and its impact on permeability: An experimental study	Dr Zhongwei Chen	The University of Queensland, School of Mechanical & Mining Engineering		
18:00-20:30	Official Dinner				Room 410 Student Center
Nov 8 (Tuesday)					
Session 4: CBM/CSG Drilling/Fracturing					
8:00-8:25		John Hattner & Nathan Shahan	Netherland Sewell & Associated, Petroleum consultant		
8:25-8:50	The key technique for CBM horizontal well drilling and fracturing	Dr Luwu Yang	President of Beijing Orion Energy Technology & Services Co., Ltd	Chairs: Prof Brian Towler+ Prof Jianguang Wu	Lecture hall, 3 rd floor, ZhongYou Building
8:50-9:15	The development and application of clean fracturing fluid from coal seam gas production water	Assoc Prof Ping Liu	Center for technique service of acid fracturing, Langfang Branch, Research Institute of Petroleum Exploration & Development		
9:15-9:40	Petroleum Engineering Research of CSG	Prof Brian Towler	Chair of Petroleum Engineering the University Of Queensland Centre for Coal		

			Seam Gas		
9:40-10:05	New ideas and technology of Chinese CBM fracturing development.	Prof Liufeng Liu	Senior technical adviser, Engineering Academy of CNPC/ General Director of Hebei Tangqi Technique Ltd.		
10:05-10:30	Tea Break				
Session 5: Water Production and the Environment					
10:30-10:55	The treatment of coal seam gas production water	Prof Yiwen Ju	University of Chinese Academy of Sciences	Chairs: Prof Enkhsaruul BYAMBAJAV+ +Prof Yijun Liu	Lecture hall, 3 rd floor, ZhongYou Building
10:55-11:20	Using hydrocarbon system analysis to evaluate seal transmissivity	Prof James Underschultz	Chair of Petroleum Hydrodynamics, the University of Queensland		
11:20-11:45	A successful case study for coal seam gas development	Prof Jianping Ye	Director of Unconventional Oil & Gas Sector, Production Department, China National Offshore Oil Corporation		
11:45-12:10	Outlook for M & A in the Australian Energy Market	James Zhang	Herbert Smith Freehill		
12:10-13:30	Lunch				
PESA Deal Day					
13:00-17:00	PESA Deal Day Company Presentations				Lecture hall, 3 rd floor, ZhongYou Building
13:30-17:30	University of Queensland Professors Meet the Chinese Students				Room 101 YiFu Building
	Professors Brian Towler (reservoir engineering), Suzanne Hurter (modelling), Steve Tyson (geology) and Jim Underschultz (hydrogeology) will meet prospective Chinese PhD students thinking about applying for CRC scholarships for study at UQ or				

	occupational trainee positions.				
13:30-17:30	China University of Petroleum Laboratory Tours				Laboratory
9:00-17:00	Exhibition				1 st floor, ZhongYou Building
Nov 9 (Wednesday)					
Student Day Opening Plenary Keynote Speakers					
8:00-8:30	New reservoir simulation research program for unconventional onshore gas at UQ	Professor Suzanne Hurter	University Of Queensland Centre for Coal	Chairs: Prof Brian Towler+ Prof ZhangSuian	Room 310, ZhongYou Building
8:30-9:00	Unconventional geostatistics for unconventional reservoirs	Professor Steve Tyson	Chair of Geology the University Of Queensland Centre for Coal		
Student Presentations					
9:00-9:20	The effect of coal wettability on bubble-water flow in coal seam cleats at pore-scale	Jie Yi	The University of Queensland, School of Earth Sciences, PhD Candidate	Chairs: Prof Brian Towler+ Prof ZhangSuian	Room 310, ZhongYou Building
9:20-9:40	Staged fracturing horizontal well productivity prediction research and application of shale condensate gas reservoirs	Hongli Wang	China University of Petroleum (Beijing), School of Petroleum Engineering, PhD		
9:40-10:00	Swell/shrink behaviour of coal in solvents/oxidants for increasing coal seam permeability	Zhenhua Jing	The University of Queensland, School of Chemical Engineering, PhD Candidate		

10:00-10:30	Tea Break				
10:30-10:50	Experimental study on the influence factors of the long-term conductivity of the tight sandstone proppant	Fengchao Xiao	China University of Petroleum (Beijing), School of Petroleum Engineering, Master		
10:50-11:10	A packed bed methodology to study the effect of coal surface wettability on relative permeability using a steady-state core flooding apparatus	Fabio Terzini Soares	The University of Queensland, School of Chemical Engineering, PhD Candidate		
11:10-11:30	Research progress in coalbed methane reservoir damage	Hao Liu	China University of Petroleum (Beijing), School of Petroleum Engineering, Master candidate		
11:30-11:50	Dimensional analysis and prediction of coal fines generation under two-phase flow conditions	Tianhang Bai	The University of Queensland, School of Mechanical & Mining Engineering, PhD Candidate		
11:50-12:10	Pulsed Arc Electrohydraulic Discharge (PAED) – a novel stimulation method for gas development from coal seam interburden	Fei Ren	The University of Queensland, School of Chemical Engineering, PhD Candidate		

四、交通指南(Transportation)

1. 火车站/机场—学校(Train station/Airport—CUPB)

	路线(Route)	时间 (Time)	价格 (Price)
北京站 Beijing Railway Station	中国石油大学(北门) $\xrightarrow{\text{向东步行 1.2公里 7分钟}}$ 地铁东关站 $\xrightarrow{\text{D口进 地铁昌平线}}$ 西二旗 站内换乘 西直门 站内换乘 北京站 13号线 2号线外环	2h	¥7
北京西站 Beijing West Railway Station	中国石油大学(北门) $\xrightarrow{\text{向东步行 1.2公里 7分钟}}$ 地铁东关站 $\xrightarrow{\text{D口进 地铁昌平线}}$ 西二旗 站内换乘 西直门 站内换乘 国家图书馆 站内换乘 北京西站 13号线 4号线 9号线	2h	¥7
北京南站 Beijing South Railway Station	中国石油大学(北门) $\xrightarrow{\text{向东步行 1.2公里 7分钟}}$ 地铁东关站 $\xrightarrow{\text{D口进 地铁昌平线}}$ 西二旗 站内换乘 西直门 站内换乘 北京南站 13号线 4号线	2h	¥7
北京首都 国际机场 Beijing Capital Internation al Airport	中国石油大学 $\xrightarrow{\text{步行500米}}$ 水关新村北 $\xrightarrow{\text{机场大巴昌平线}}$ 首都国际机场	2.2h	¥16
北京南苑 机场 Beijing NanYuan Airport	中国石油大学(北门) $\xrightarrow{\text{向东步行 1.2公里 7分钟}}$ 地铁东关站 $\xrightarrow{\text{D口进 地铁昌平线}}$ 西二旗 站内换乘 西直门 站内换乘 公益西桥 步行235米 南苑机场 13号线 4号线 机场大巴公主坟线	2.5h	¥24

2. 公交(Bus)

直达专线 124 路，石油大学站（早班 5:30，末班 23:00）

→德胜门西站

124, CUPB (early bus 5:30 a.m., last bus 23:00 p.m.)

→Deshengmen West Bus Station.

345 快，东关南里小区南门站（早班 5:20，末班 22:15）

→德胜门西站

345 fast, CUPB (early bus 5:20 a.m., last bus 22:15 p.m.) →Deshengmen West Bus Station.

3. 驾车(Self driving)

从 G6 八达岭高速的昌平南环路/昌平城区入口驶入高速，路线如图：

Get on the highway from the Changping South Ring Road/Changping City Entrance of G6.



4. 学校周边公共交通站点(Public Transportation Stops)



五、天气信息(Weather)

6日(周日)	7日(周一)	8日(周二)	9日(周三)
多云转小雨	阴转晴	晴	晴转多云
11°C/ 5°C	11°C/ 2°C	10°C/ 0°C	10°C/ 1°C
微风	4-5级转3-4级	微风	微风