东天山火山岩及含矿性、东天山东段重要靶区综合评价等多项课、专题研究，并将构造动力成矿理论应用于找矿实践，在理论和找矿方面均取得重要进展，“新疆哈密玉西银矿床构造动力成矿机制”一文在 30 届国际地质大会上交流，并获得多项地矿部重大科技成果奖。

周济元教授除在构造地质学、地质力学、构造动力成矿学和成矿预测学领域具有较深的造诣外，在深部地质、地震地质及工程区域稳定性评价等方面也取得了丰硕成果。他自 1985 年起主持或参加了秦岭、台湾—阿尔泰深部地质—地球物理综合探测研究，其中国家 305 项目—可可托海—阿克赛深部地球物理综合探测研究课题获两部一委重大科技成果奖、新疆维吾尔自治区人民政府一等奖。此外，还为四川锦屏电站区域稳定性评价、西昌有无大震的判定及社会安定和四川松潘长征纪念总碑碑址的选定都作出了重大贡献，后二者还受到四川省委、省政府及成都军区的表彰。

三十多年来，周济元教授在地学领域里不懈努力、辛勤耕耘，不断探索，勇于创新，成绩蜚然。他提出了地质力学的若干新理论和新方法，如矿液运移势和运移理论、构造动力成矿理论和成矿预测方法。运用这些理论发现了一批大型、特大型矿床；他基础理论扎实，治学严谨，教书育人，硕果累累。至今，已为国家培养了硕士研究生十五名，在国内外共发表论著 50 余篇，教材二本；获国家级成果奖一次，部、省级成果奖 11 次，部省级优秀论文奖 4 次；在地质力学、大地构造学、深部地质、矿床矿田构造学、成矿过程动力学、成矿预测学、地震地质学及区域稳定性评价等领域都取得了丰硕成果，颇有建树。作为有突出贡献的科学家，1992 年周济元教授获国务院“政府特殊津贴”，并被列入英国国际名人录。

（吴礼道）

PROFESSOR ZHOU JIYUAN
(1936—)

Prof. Zhou Jiyuan, a specialist in geotectonics and geodynamics and Ph. D. student tutor, was born in 1936 in Wujing, Jiangsu Province. He graduated from Chengdu College of Geology in 1960. Under the guidance of prof. Li Siguang, he studied geodynamics from 1962 to 1965. Then he engaged in geotectonics, geodynamics adn oilfield tectonics in Chengdu College of Geology. In1966 he established the speciality of geodynamics in the college. He was one of the members of Commission on Geotectonics and Geodynamics in Geological Society of China. He was standing council member, Vice Chairman of Seismic Society of Sichuan, Chairman of Commission on Seismology, Member of Leading Group of National Geodynamic Plan, Standing Council Member of Educational Society in Sichuan, Vice Chairman of Geology Educational Society in Sichuan, Vice Chairman of Textbook Supervision Committee of Geodynamics in the Ministry of Geology and Mineral Resources. From 1982 — 1991 he was Vice President of Chengdu College of Geology, Deputy Director of the Deep Geology-Geophysic Institute. He was awarded the title of outstanding youth expert in Sichuan. In 1991 — 1995 he was Director of Nanjing Institute of Geology and Mineral Resources. In 1993 he was elected as representative of Eighth National Peopte's Congress of Jiangsu. In 1994, he was Vice Chairman of geologic Society of Jiangsu, Chicf of Academic Commission, Deputy Chief of Commission on Geo-

dynamics in Geological Society of China, Chief Editor of《volcanology Mineral Resources》, member of editorial board of《Journal of Geodynamics》.

Prof. Zhou has been engaging in geotectonics and geodynamics, especially in identification of trace dynamics in tectonics. His book《The Determinative Method of the Mechanical Properties of Structural Plane》has been popular in China. In 1970s Prof. Zhou was in charge of project《Study on Distributional Relationship Between Tectonic System and Endogenetic Deposit》. He proposed a new theory and analytic method of distribution of tectonic system and pattern of movement. He also applied the theory to prospecting deposits, especially in schreyerite magnetite and gold. Large gold deposit was found. He was awarded in Science Conference of Sichuan, 1978 for superlarge gold deposit finding. This achievement was highly evaluated by the experts in the 25th International Congress. In 1980s he put forward the theory of tectonic dynamy driving oil solution an oil gas migration, Under the guidance of this theory, small size copper deposit changed into middle size for new oil body found at Jiande copper deposit in zhejiang, of which the reserves increased by 1.5 times. A new oil field was also found in Sichuan Basin. Then he proposed element activiation, migration and mineralization irritated ty tectonic dynamics. Based on the theory new bodies were found in Lalachang copper deposit, Hui Li, Sichuan, Yuxi silver deposit in Hami Xinjiang and gold deposit in Northwestern Guangxi. Superlarge deposit was extended in northeast gold deposit in Songpai, Sichuan. He won the first prize for the important science and technology achievement by the People's Government of Sichuan Province.

The paper《On the Mineralization Controlled by the Tectonodynamic Force》was read in the 29th International Congress and was complied in the magazine《Resources Geology》in Japan. In 1986 he was in charge of national project No. 305 volcanic rock and its ore-bearing in Dongtian Mountain and general evaluation and study on important target in East Dongtian Mountain. He applied the theory of teetonic dynamics mineralization into ore-hunting. He was awarded for the important development in prospecting theory and method by the Ministry of Geological and Mineral Resources.

Prof. Zhou is an expert not only on geotectonics geodynamics, geodynamic mineralization and metallogenic prognosis, but also on deep geology, seismogeology and engineering geologic evaluation. In 1985, he was in charge of topic study on deep geology-geophysic detective section in Oinling Taiwan-Altai, of which National Project No. 305—deep geophysic detective section in Keketuohai-Akesai was awarded by State Planning Commission and State Scientific and Technological Commission and Ministry of Finance for the important scientific and technological achievement. He was granted the first prize by the Xinjiang Uygur Antonomous Region Government.

He was awarded by Commission of Sichuan Province, Provincial Government and Provincial Command of the P. L. A for the determination whether there were earthquakes at Huichang, Sichuan and selecting site for the Monument to the Red Army's Long March at Songpai, Sichuan.

Prof. Zhou has been working hard in geology and made great contribution in the past 30 years. So far he has trained 15 Masters. He has published more than 50 papers at home and abroad. He has written two textbooks. He won the scientific and technological prize once by the State, eleven times by the Ministry and the Province, four times for the excellent papers by the Ministry and the Province. He proposed a lot of new theories and methods on geomechanics, geotectonics, deep geology, metallogenic prognosis seismogeology. As an outstanding scientist, he got state's special allowance. His name was listed in《International Who's who》.

(Translated by Hu Qing)

(接 116 页)

3 **宝玉石测试技术研究** 宝玉石鉴定的难点在于天然宝石与合成宝石和优化宝石的鉴别。由于波谱分析能够测定宝玉石中的微量、超微量组分(结构水,致色元素等)、微量杂质(显微包裹体)、掺杂物(致色染料、有机填料等),故能比较有效地鉴别天然的与合成的和优化处理的各类宝玉石,且能通过对显微包裹体的测定,判别宝玉石的种属和产地,而且波谱分析是非破坏性的方法,对宝玉石原料和刻面宝石都适用。针对上述,刘玉山、魏家秀等著文全面地介绍了红外光谱、激光拉曼探针及可见光吸收光谱等波谱分析在宝玉石鉴定中的应用。

4 **宝石颜色和改色的研究** 颜色是宝石的品质特征和评价宝石的主要的因素,是当前宝石研究中的热门课题。本次提交的论文对钻石、红蓝宝石等名贵宝石的改色技术以及宝石颜色的定量、指数化作了深入的研究。金刚石致色主要多由氮、硼等杂质所形成的色心以及辐射损伤使晶格发生畸变而致色,并提出了辐射和热处理相结合的改色方法(何雪梅等),红蓝宝石的颜色与 Cr^{3+} 和 Ti^{4+}、Fe^{3+}、Fe^{2+}、Ga 元素的含量有关(曹亚文等),山东蓝宝石采用高温环境下的氧化—还原作用改善颜色,取得了良好的效果(余晓艳等),海蓝宝石则是由绿柱石隧道中的 H_2O 方式所致(邹天人),电气石的颜色多由阳离子 Mg、Fe、Mn、Li、Al 含量的多寡而呈系列性变化(邹天人)。翡翠(赌石)的皮色进行了系统的研究(陈志强、袁奎荣等),借以判断翡翠毛料的内部质量。为了精确地描述和评价宝石的颜色,刘玉山提出了宝石颜色指数化的概念。

5 **珠宝市场和珠宝文化** 这次学术讨论会上,珠宝市场和珠宝文化方面的文章,也受到与会者的热烈赞赏。

在专题讨论中,与会代表一致认为,近年来我国经济的迅速发展,人民生活逐渐走向小康,人们的消费心理日趋成熟,国内市场呈现"黄金唱罢,珠宝登场"的消费态势。加之对外开放的不断扩大,为宝玉石业的发展提供了良好的机遇。珠宝市场的走势总体上看是平稳的。但是,当前我国宝玉石业还处于起步阶段,机遇与困难并存。宝玉石业在国内资源的勘查开发,国外资源的利用,产品的升级进档,科学技术进步,国内市场建设,国外市场开拓等方面,都还存在不少问题。为使我国宝石业能持续、稳步、健康地发展,加强行业间的学术交流与合作是十分必要的。代表们认为,通过本届会议的学术交流和讨论,将不仅推动宝石学科的发展,还将促进宝玉石研究新成果的应用。会后安排了地质考察路线,代表们还饶有兴趣地参观了扬州玉器厂。专业委员会决定,第三届全国宝玉石学术讨论会将于 1998 年在云南召开。

(张洪石)