

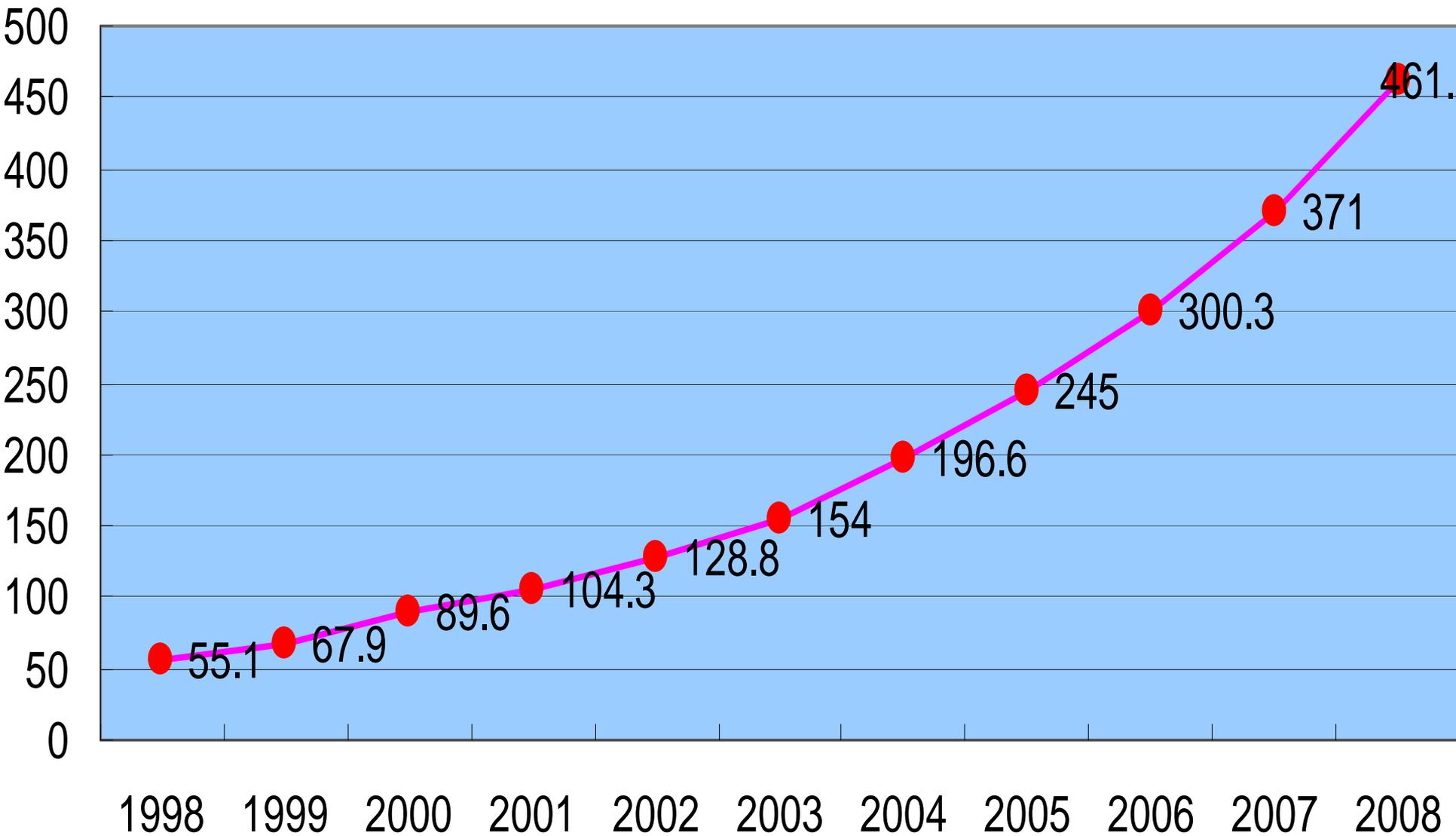


How Do Chinese Universities Respond to Misconduct in Research?

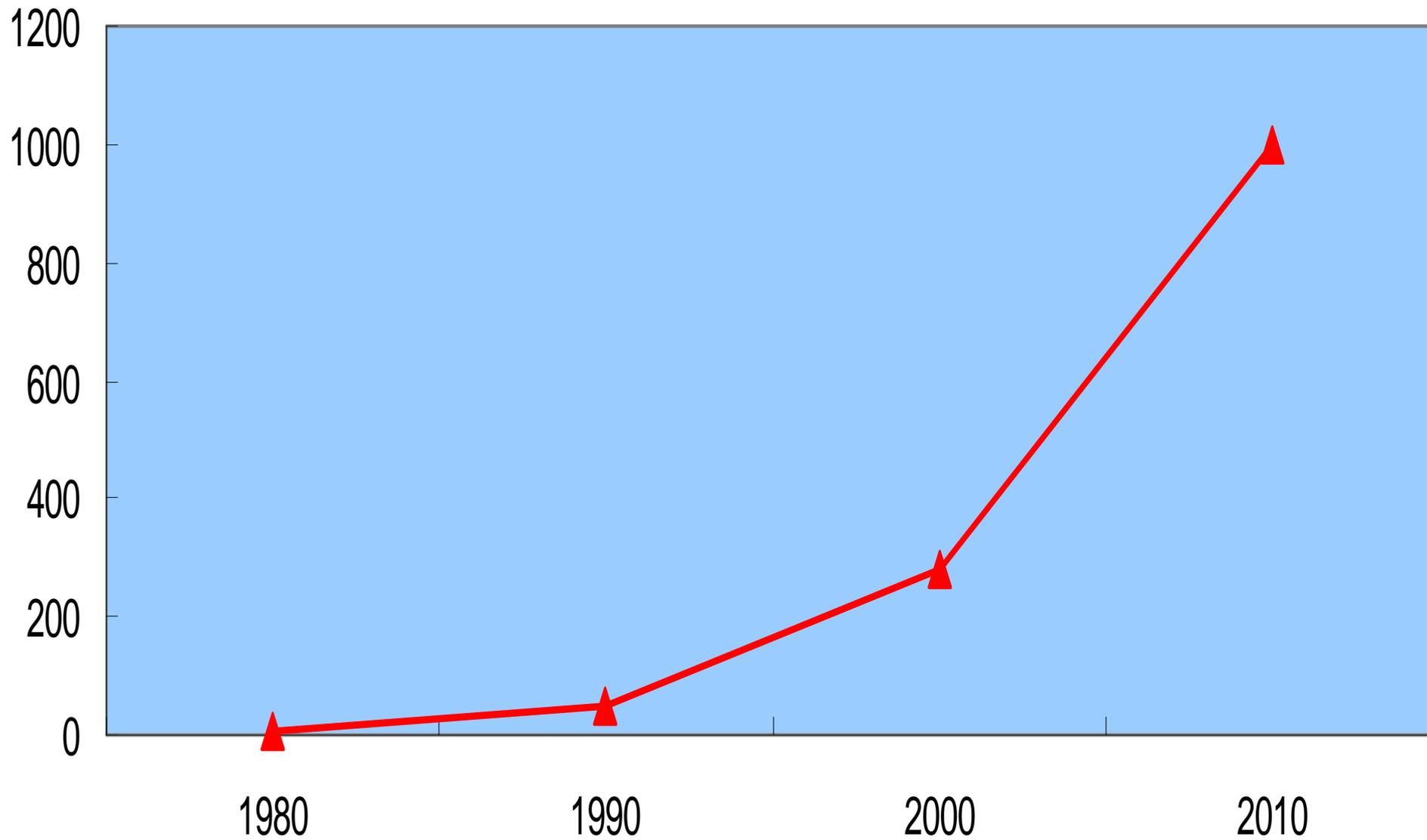
GONG Ke

Tianjin University, China

R&D(Billion RMB)

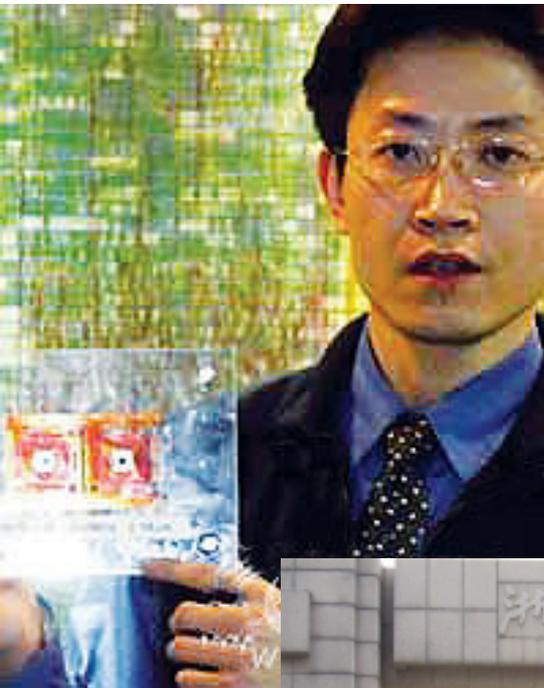


TU's research income (Million RMB)





- **Scientific and technical research in China has experienced dramatic growth in past 30 years, however some misconducts have also appeared. How to maintain research integrity become a serious challenge to universities and research institutes.**



Dr. CHEN Jin had used a Motorola DSP Chip to counterfeit self-developed “first Chinese DSP chip.

Dr. LI Liansheng had aggrandized his achievement for applying national award.



Dr. HE Haibo had seriously plagiarized research results from others and used falsified data to publish his papers.



- **When we first dealt with the misconducts, it was found there were no relevant regulations to treat the issues.**
- **So, great efforts have been made to develop academic ethical codes and research rules.**

教育科研机构管理规定

- 河北大学对学位论文抄袭剽窃、弄虚作假行为的处理办法（试行）
- 中国政法大学学位论文学术规范审查办法
- 浙江大学学术道德行为规范及管理办法
- 浙江大学本科生学术道德问题调查规程
- 广西大学学术道德规范
- 西北农林科技大学学术道德规范
- 陕西师范大学学术道德规范实施细则
- 安徽师范大学教师学术道德规范
- 武汉大学学术道德规范实施细则
- 四川大学关于学位（毕业）论文抄袭、剽窃等学术不端行为的处理办法（试行）
- 中国科学院金属研究所研究生、博士后学术道德规范管理办法
- 哈尔滨工业大学学术道德规范（试行稿）
- 同济大学教师学术道德规范
- 广东商学院学术道德规范建设与管理办法（试行）
- 华中科技大学学术道德规范及学术不端行为处理规定（试行）

教育科研机构管理规定

- 重庆市社科规划项目实施中科研不端行为处理办法（试行）
- 南京大学科学研究行为规范与学风建设管理办法（试行）
- 上海交通大学学术道德委员会章程（试行）
- 北京大学化学学院学术道德委员会工作暂行条例
- 福建师范大学关于加强学术道德规范的若干规定
- 清华大学关于加强学术道德建设的若干意见
- 清华大学关于学术不端行为的处理办法（试行）
- 复旦大学学术规范及违规处理办法（试行）
- 中国人民大学科学研究行为规范及管理办法（试行）
- 西安交通大学学术行为规范及管理办法



教育部关于严肃处理高等学校学术不端行为的通知

教社科[2009]3号

各省、自治区、直辖市教育厅（教委），新疆生产建设兵团教育局，计划单列市教育局，有关部门（单位）教育司（局），部属各高

长期以来，高等学校广大教师潜心钻研、求真务实、勇于探索、锐意进取、锐意创新，为国家的科技进步和经济社会发展做出了重要贡献。但发生在少数人身上的学术不端行为，严重损害了高等学校的声誉和学术诚信，必须采取切实措施加以解决，绝不姑息。



中华人民共和国科学技术部

The Ministry of Science and Technology of the People's Republic of China

[\[放大字体\]](#)[\[缩小字体\]](#)[\[打印\]](#)[\[发送\]](#)[\[我要纠错\]](#)[\[关闭窗口\]](#)www.most.gov.cn

[科技部门户](#) > [科研诚信建设](#) > [规范性文件](#)

科学技术部令第11号 《国家科技计划实施中科研不端行为处理办法（试行）》

科技部门户网站 www.most.gov.cn

2006年11月10日

来源：科技部

《国家科技计划实施中科研不端行为处理办法（试行）》已于2006年9月14日经科学技术部第25次部务会议审议通过，现予发布，自2007年1月1日起施行。

部长 徐冠华

二零零六年十一月七日



科 学 技 术 部
教 育 部
财 政 部
人 力 资 源 和 社 会 保 障 部
卫 生 部
解 放 军 总 装 备 部
中 国 科 学 院
中 国 工 程 院
国 家 自 然 科 学 基 金 委 员 会
中 国 科 学 技 术 协 会

文件

国科发政〔2009〕329号

关于印发《关于加强我国科研 诚信建设的意见》的通知

各省、自治区、直辖市及计划单列市科技、教育、财政、人事、卫生厅（委、局）、科协，新疆生产建设兵团科技、教育、财政、人事、卫生局、科协，国务院有关部门科技、教育主管司（局），中科院各分院、研究所：

为加强我国科研诚信建设，科研诚信建设联席会议单位联合发布《关于加强我国科研诚信建设的意见》，现印发给你们，请认真贯彻落实。

国务院学位委员会文件

学位〔2010〕9号

国务院学位委员会关于在学位授予工作中 加强学术道德和学术规范建设的意见

各省、自治区、直辖市学位委员会，新疆生产建设兵团教育局，有关部门（单位）教育（人事）司（局），中国人民解放军学位委员会，中共中央党校学位评定委员会，各学位授予单位：

自1981年我国实施学位制度以来，各学位授予单位按照《中华人民共和国学位条例》及其暂行实施办法的规定，建立健全规章制度，树立良好学习风气，认真做好学位授予工作，保证了我国学位授予的质量，为我国高层次人才培养做出了重要贡献。近年来，在学位授予工作中出现了一些学术不端行为，损害了我国学位形象。为进一步加强学术道德和学术规范建设，特提出如下意见。

一、在学位授予工作中加强学术道德和学术规范建设，对树立良好学风，培养正直诚信、恪守科学道德、献身科学研究的拔尖创新人才具有重要作用，各学位授予单位必须高



中国科学技术协会
www.cast.org.cn

中国科协年会 学会建设 学术交流 讲比活动 科普及农兴
全国科普日 全民科学素质纲要 视听科学 科普资源开发指
继续教育 表彰奖励 工作研究 计划预算 机关党建 文件资料

[首页](#) | [关于中国科协](#) | [领导机构](#) | [机关部门](#) | [要闻](#) | [工作动态](#) | [全国学会](#) | [地方科协](#) | [基层建设](#) | [科学博客](#) | [媒体](#)

❖ 科学道德建设

科技工作者科学道德规范(试行)

2009年10月31日

(2007年1月16日中国科协七届三次常委会议审议通过)

第一章 总 则

第一条 为弘扬科学精神，加强科学道德和学风建设，提高科技工作者创新能力，促进科学技术的繁荣发展，中国科学技术协会根据国家有关法律法规制定《科技工作者科学道德规范》。

第二条 本规范适用于中国科学技术协会所属全国学会、协会、研究会会员及其他科技工作者。

第三条 科技工作者应坚持科学真理、尊重科学规律、崇尚严谨求实的学风，勇于探索创新，恪守职业道德，维护科学诚信。



www.ccsj.com

第 30 卷第 3 期 煤 炭 学 报 Vol. 30 No. 3
2005 年 6 月 JOURNAL OF CHINA COAL SOCIETY June 2005
文章编号: 0253-9993(2005)03-0374-04

煤油共处理生成沥青性质研究

袁礼尧, 许松林

(天津大学 新能源技术国家工程研究中心, 天津 300072)

摘 要: 本文以煤油和石脑油渣 (1:1) 为主要原料, 进行共处理反应研究, 概述了进行该反应在不同条件下反应产物的性质评定, 指出由于温度、反应时间等实验条件的不同, 重质产物的性质存在着很大的差别, 随着反应温度的变化, 催化裂化渣量与页岩共处理的重质产物产率或呈规律性的变化, 重质产物性质与高等级道路沥青类似, 由此试验可以看出, 重质产物有望用于制备高等级道路沥青。

关键词: 催化裂化渣; 共处理; 沥青
中图分类号: TQ629.1 **文献标识码:** A

Study on asphalt produced by coprocessing coal and catalytic cracking residue

YUAN Li-yao, XU Song-lin

(National Engineering Research Center for Oilfield Technology, Tianjin University, Tianjin 300072, China)

Abstract: The co-processing reaction of coal and catalytic residue (CCR), especially the heavy toluene soluble fractions (HTSF) produced were studied as a substitute when the ratio of coal to CCR is 1:1. The yield of HTSF is the highest among the other products. The properties of the HTSF changes regularly with the variation of reaction temperature and time. Group composition of HTSF from co-processing of coal and CCR changes regularly with some rules. Characters of HTSF and the asphalt are approximate. It may be used as high grade paving asphalt for highway and a pitch producer of carbon artifacts.

Key words: catalytic cracking residue; co-processing; asphalt

煤油共处理被认为是将煤和油同时转化成洁净液体燃料的最有发展前景的路线, 煤油共处理在得到轻质油品和少量气体物的同时, 还会有相当量的重质产物生成^[1]。近 20 年来, 虽然煤油共处理研究已取得很大进展, 但由于单因素追求收率, 忽略了重质产物的利用问题, 从而导致了反应条件较为苛刻, 因此成本相对较高, 若能深入了解重质产物的组成性质, 对其合理利用 (如用作道路沥青或材料^[2-4]等), 很可能形成温和的、以多元产物为目的的煤油共处理新工艺, 从而进一步降低煤油共处理成本, 改善其总体经济性^[5]。本研究采用煤与石脑油渣加高压共处理的方法, 为重质产物的开发利用提供理论基础。

1 实验方法

1.1 主要原材料

实验用煤为小于 80 目的山东兖州煤, 催化剂为担载的 Fe/S 双催化剂, 担载量为 Fe (0.6%) : S

收稿日期: 2003-11-26
基金项目: 国家自然基金资助项目 (20075480)
作者简介: 袁礼尧 (1975-), 男, 河南南阳人, 硕士, 现从事煤油共处理研究。
联系人: 袁礼尧, Tel: 022-27401301, E-mail: ayly@tjpu.edu.cn

- In 2006, a graduated doctor student had been prosecuted for plagiarizing research results of a lab of China Academy of Science where he had visited, after notarized his plagiarism, his doctor degree had been canceled by the university.



Model of mass transfer in polyvinyl alcohol membrane for isopropanol/water mixture

Meng Han^{a,*}, Bo Zhao^b, Xue-Mei Zhang^a, Wei-Jiang Zhang^a

^a Chemical Engineering Research Center, Tianjin University, Tianjin 300072, China
^b School of Chemical Engineering & Technology, Hebei University of Technology, Tianjin 300130, China
Received 13 August 2006; received in revised form 3 January 2007; accepted 16 January 2007
Available online 30 January 2007

Abstract

Based on Flory–Huggins theory and Fick's law, the model of mass transfer in polyvinyl alcohol (PVA) membrane for isopropanol/water mixture was established. The predicted results fit well with the experimental data. The interactional parameter between water and PVA membrane is less than that between isopropanol and PVA membrane, which validates that water is preferentially adsorbed and dissolved in PVA membrane. The plasticizing coefficient and diffusion coefficient at infinite dilution of water are larger than those of isopropanol, which shows that the dissolution and permeation of water are greater than those of isopropanol in PVA membrane. So water permeates preferentially. Both the interactional parameter between water and isopropanol in PVA membrane and that in feed rise with the increase of isopropanol content in feed, which shows that the larger isopropanol content is, the higher selectivity of PVA membrane is and the more remarkable separation effect of pervaporation process is.
© 2007 Elsevier B.V. All rights reserved.

Keywords: Polyvinyl alcohol membrane; Swelling equilibrium; Permeate flux; Isopropanol/water mixture; Pervaporation

1. Introduction

Pervaporation (PV) is an energy-efficient process for the separation of liquid mixtures in the chemical processing industry, especially for separation of azeotropic or close-boiling liquid mixtures [1]. Now dehydration of organic solvents is the best-developed area in PV technology.

One vital issue for industrial application of PV processes is the ability to tailor membrane materials with high PV performance. Another fundamental issue is modeling pervaporation transport to optimize PV process. The model of mass transfer through the membrane has been studied quite extensively [2]. Many models were proposed to predict the mass transfer process, such as solution-diffusion model [3], thermodynamic of irreversible process [4], Maxwell–Stefan theory [5], pore flow model [6], pseudo phase change solution-diffusion model [7], resistance-in-series model [8], molecular simulation [9] and so on. Among them, solution-diffusion model is most widely used in describing PV transport including sorption and diffusion steps. Considerable attention has been focused on the mass transfer behavior in recent years.

For modeling pervaporation transport, the permeation flux, which depends on the solubility and diffusivity of components in the membrane, should be obtained. Usually, the solubility is calculated according to the Flory–Huggins theory [10]. For the diffusivity, the predictive methods of component diffusion in polymer solution have been commonly studied [11]. The solvent transport in the membrane is generally considered to be a molecular diffusion mechanism, so Fick's law [12,13] is often used to describe the diffusion process of component in membrane, which mainly involves in the calculation of diffusion coefficient. In recent years, many papers [14–16] have described the diffusion coefficient of binary mixtures in pervaporation membrane, where the magnitude of obtained diffusion coefficient is about 10^{-7} to 10^{-11} m² h⁻¹.

Isopropanol, a widely used solvent in chemical and pharmaceutical industries, is known to form an azeotrope with water, a characteristic that creates difficulties in its recovery by the conventional distillation [17], while PV technique, as an economical and safe and clean means, is anticipated to achieve dehydration of isopropanol. So the pilot studies have been carried out by the author of this paper and satisfactory results have been obtained [18].

In this study, polyvinyl alcohol (PVA) membrane is employed to separate isopropanol/water mixture. And based on

* Corresponding author. Tel.: +86 13820919653; fax: +86 22 27409476.
E-mail address: hanstar2570@126.com (M. Han).

异丙醇水混合物在PVA膜中的传质模型

韩 蒙¹, 李春利², 张雪梅¹, 张卫江¹

(1. 天津大学化学工程研究所, 天津 300072; 2. 河北工业大学化学工程学院, 天津 300130)

摘 要: 基于Flory–Huggins理论和Fick定律, 建立了323 K下聚乙醇醇(PVA)膜分离异丙醇水混合物的传质模型, 模型预测结果与实验数据吻合良好。水与PVA膜的相互作用参数小于异丙醇与PVA膜的相互作用参数, 说明水在膜中优先吸附并溶解, 水在膜中优先溶解和扩散。水的塑化系数和无限稀释扩散系数均大于异丙醇, 说明水在膜中的溶解能力和扩散能力均大于异丙醇。膜中水的溶解能力和扩散能力均大于异丙醇, 说明水在膜中的溶解能力和扩散能力均大于异丙醇。水和异丙醇在PVA膜中的传质模型, 与实验数据吻合良好。水和异丙醇在PVA膜中的传质模型, 与实验数据吻合良好。

关键词: 膜分离; 平衡; 传质模型; 模型
中国分类号: TQ028.8 文献标志码: A 文章编号: 0493-2137(2007)06-0245-06

Transport Model of Isopropanol-Water System in PVA Membrane

HAN Meng¹, LI Chun-li², ZHANG Xue-mei¹, ZHANG Wei-jiang¹

(1. Chemical Engineering Research Center, Tianjin University, Tianjin 300072, China; 2. School of Chemical Engineering and Technology, Hebei University of Technology, Tianjin 300130, China)

Abstract: Based on the Flory–Huggins theory and solution-diffusion model, the transport model of isopropanol/water system in polyvinyl alcohol (PVA) membrane was established at 323 K. The calculated values of the model were in a good agreement with experimental values. The interactional parameter between water and PVA membrane was less than that between isopropanol and PVA membrane, which showed that water was preferentially adsorbed and dissolved in PVA membrane. The plasticizing coefficient and infinite dilution diffusion coefficient of water were larger than those of isopropanol, which showed that the dissolution and permeation of water were greater than those of isopropanol in PVA membrane. So water permeates preferentially. Both the interactional parameter between water and isopropanol rises with the increase of isopropanol concentration in the mixture, which showed that the higher isopropanol concentration leads to the higher selectivity of the membrane and the better separation effect of pervaporation.

Keywords: pervaporation; isopropanol-water system; swelling balance; permeate flux; model

异丙醇在溶剂、清洗剂、制药、有机合成等诸多领域小应用广泛。目前, 异丙醇水溶液生产异丙醇面临发展前途。但此类产品中含有少量水, 直接影响了异丙醇的应用。同时, 一些工业废水中更含有大量异丙醇, 合理利用异丙醇, 不仅可以避免污染, 还能降低成本。由于异丙醇与水能形成共沸混合物, 利用传统的分离方法无法经济地将异丙醇和水分离。膜分离技术—种高效的绿色分离方法, 在石化、医药、食品、环保等

生产生活中越来越受到重视和广泛应用。采用PV技术分离异丙醇水溶液, 具有工艺简单、无污染、操作简便、效能高等诸多优点。笔者曾对此做了初步探索, 取得较好结果。

目前关于膜分离的研究主要集中在高性能膜材料的制备以及相关传质问题的探索。限于高分子技术现状, 关于高性能膜材料的研究进展缓慢, 而相关传质模型在近几年得到了广泛研究并取得一定进展, 主

• In 2007, we are informed that Prof. ZHANG and his students had double published their research in Chinese and in English journals, so they are all punished by the university.



- **In treating with misconduct prosecuting, a big challenge we are facing is how to avoid conflicts of interests, so that some “objective” criterion had been introduced and software has been developed for.....**



- **And, we found it is necessary that the academic society in various fields takes the responsibility to maintain the research integrity and to give trustworthy judgments.**



- **In 2009, a well performed young faculty applied for promoting to associate professorship, however, he is prosecuted for doubled publication in Chinese and English in 2002 when he was a student.**
- **This had been caused a big debate.**



- **Many students asked why a research result could not published multiply?**
- **This made us to realize the more important issue is to let student not only be aware of the rules but also to *understand* the inbeing of the rules, i.e. the VERITY.**



- **So, we have established training courses for both students and faculty, in order to help students to understand why and how to keep the research integrity.**



- **In summary**

- to set up good rules
- to avoid interest conflicts in implementing the rules
- to educate students understand the inbeing of the rules, which are verity and responsibility