#### RESEARCH PAPERS

钨湿法冶金中带有长链交联剂的阴离子交换剂的吸附性能研究

A.G. Kholmogorov<sup>a</sup>, O.N. Kononova<sup>b</sup>, S.V. Kachin<sup>b</sup>, O.P.Kalyakina<sup>b</sup>, G.L.Pashkov<sup>a</sup>

- <sup>a</sup> Institute of Chemistry and Chemical Technology, Siberian Department of the Academy of Science, Karl Marx Pr.42, 660049 Krasnoyarsk, Russia
- <sup>b</sup> Department of Chemistry, Krasnoyarsk State University, Svobodny Pr.79, 660062 Krasnoyarsk, Russia

收稿日期 修回日期 网络版发布日期 接受日期

摘要 The macroporous anion exchangers with long-chained cross-linking agents were investigated

for the tungsten recovery from salt solutions. The physical-chemical characteristics of these sorbents were studied by means of sorption-desorption experiment aswell as electron and IR-spectroscopy. The anion exchangers on the basis of macroporous copolymers of methylacrylate and divinyl-ester of diethyleneglycol or tetravinyl-ester of pentaerythritol possess the exchange capacity to tungsten 2-5 times greater than the porous anion exchangers on the basis of styrene and divinylbenzene, therefore they can be used for selective tungsten recovery from complex salt solutions.

关键词 <u>anion exchangers</u> <u>macroporous structure</u> <u>long-chained cross-linking agents</u> <u>tungsten</u> recovery salt solution

ecovery sait solution

分类号

### DOI:

# Study of Sorption Properties of Anion Exchangers with LongChained Cross-Linking Agents for Tungsten Hydrometallurgy

A.G. Kholmogorov<sup>a</sup>, O.N. Kononova<sup>b</sup>, S.V. Kachin<sup>b</sup>, O.P.Kalyakina<sup>b</sup>, G.L.Pashkov<sup>a</sup>

<sup>a</sup> Institute of Chemistry and Chemical Technology, Siberian Department of the Academy of

Science, Karl Marx Pr. 42, 660049 Krasnoyarsk, Russia

<sup>b</sup> Department of Chemistry, Krasnoyarsk State University, Svobodny Pr.79, 660062 Krasnoyarsk, Russia

Received Revised Online Accepted

Abstract The macroporous anion exchangers with long-chained cross-linking agents were investigated for the tungsten recovery from salt solutions. The physical-chemical characteristics of these sorbents were studied by means of sorption-desorption experiment aswell as electron and IR-spectroscopy. The anion exchangers on the basis of macroporous copolymers of methylacrylate and divinyl-ester of diethyleneglycol or tetravinyl-ester of pentaerythritol possess the exchange capacity to tungsten 2-5 times greater than the porous anion exchangers on the basis of styrene and divinylbenzene, therefore they can be used for selective tungsten recovery from complex salt solutions.

**Key words** anion exchangers; macroporous structure; long-chained cross-linking agents; tungsten recovery; salt solution

## 通讯作者:

A.G. Kholmogorova

作者个人主页: A.G. Kholmogorov<sup>a</sup>; O.N. Kononova<sup>b</sup>; S.V. Kachin<sup>b</sup>; O.P.Kalyakina<sup>b</sup>; G.L.Pashkov<sup>a</sup>

# 扩展功能

## 本文信息

- ► Supporting info
- ▶ <u>PDF</u>(1708KB)
- ▶ [HTML全文](OKB)
- ▶参考文献

## 服务与反馈

- ▶把本文推荐给朋友
- ▶加入我的书架
- ▶加入引用管理器
- ▶引用本文
- ▶ Email Alert
- ▶ 文章反馈
- 浏览反馈信息

## 相关信息

- ▶ <u>本刊中 包含 "anion</u> exchangers"的 相关文章
- ▶本文作者相关文章
- · AG Kholmogoroa
- · ON Kononoab
- · SV Kachinb
- OPKalakinab
- · GLPashkoa