

### 论文摘要

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## 银精矿加石灰焙烧过程中银的化学物相变化

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**摘要:** 采用化学物相分析方法, 定量研究了石灰和焙烧气氛对银精矿加石灰焙烧过程中银的化学物相及其相对含量变化的影响, 并借助热力学分析手段初步探讨了石灰在主要载银矿物的氧化、解离过程中的作用机制。结果表明: 添加石灰能够大大地降低焙砂中的氧化物包裹银含量, 如焙烧2h后的氧化物包裹银含量由直接焙烧时的11.08%降到有石灰存在时的4.15%, 而与焙烧气氛的关系不大。

**关键字:** 银精矿; 石灰焙烧; 银的化学物相

## Chemical phase changes of silver in lime roast process of silver-gold concentrate

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**Abstract:** In order to explain the fact that lime roasting process (LRP) can evidently improve silver leaching yield, the influences of lime and roasting atmosphere on chemical silver phase types and their contents in the LRP of silver concentrate were studied quantitatively by chemical phase analytical method. The action of lime on oxidation and dissociation of silver-existed minerals was also discussed primarily in virtue of thermodynamics calculations. The results show that amount of silver encapsulated in oxides of a calcine can be reduced obviously from 11.08% in the absence of lime to 4.15% in the presence of lime when roasting time is equal to 2 h, and is regardless of air or oxygen-riched atmosphere.

**Key words:** silver concentrate; lime roast process; chemical phase of silver

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