

2.

1)Sun Liang, Qiu Keqiang. Vacuum pyrolysis and hydrometallurgical process for the recovery of valuable metals from spent lithium-ion batteries[J]. Journal of Hazardous Materials, 2011, 194: 378-384.

2)Sun Liang, Qiu Keqiang. Organic oxalate as leachant and precipitant for the recovery of valuable metals from spent lithium-ion batteries[J]. Waste Management, 2012, 32(8): 1576-1583.

3) . . . : CN 101969148
A[P], 2011-02-09.

3.

2009.9-2011.9

2011.3-2011.2

600

2011.6 2011

" "

2010.10

2009.9-2010.8

09 09

4.

1) (2013)

2) (2013)

3) " " (2009 2010 2011)

4) " " (2011) TOP 5%

5) " " TOP 5%

1.

— × × × ×

—

/ —

—

—

2.

— " "

— " "

—

—

—

"

"

"

"

3.

NPJ-2013-1653

4.

5.

6.

7.

8.

9.

"

"