

TIMI “Fizika va kimyo” kafedrası

Metallarning elektrokuchlanishlar qatori

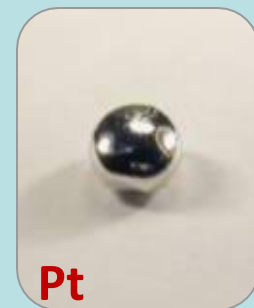
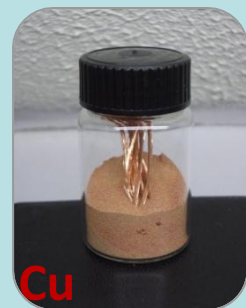
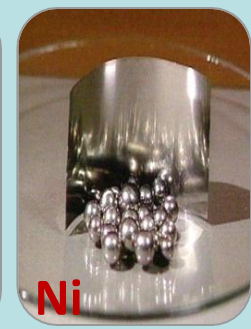
Muallif: t.f.n.

Komilov Qamariddin O’rinovich

- ***Maqsad:*** Metallarning elektrokimyoviy kuchlanishlar qatori haqida umumiy tushunchaga ega bo'lish.
- ***Kutilayotgan natija:*** Metallarning kuchlanishlar qatori haqida to'liq tushuncha va ko'nikmalarga ega bo'ladilar.

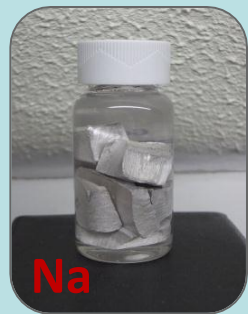
Tashqi ko'rinishi va saqlanish sharoiti

Li K Ba Sr Ca Na Pb (H₂) Cu Hg Ag Pt Au



Tashqi ko'rinishii va saqlanish sharoiti

Li K Ba Sr Ca Na Mg Al Mn Zn Cr Fe Cd Co Ni Sn Pb (H₂) Cu Hg Ag Pt Au



Kerosinda mahkam berkitilgan idishlarda saqlanadi

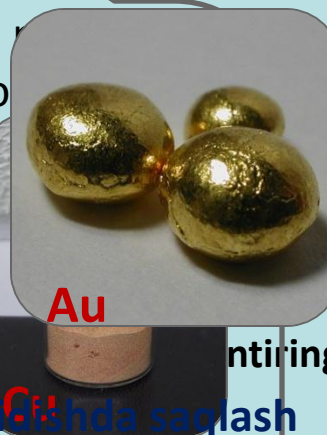
Na



Al



Ag



Au

- faol Me kerosin
- Agar bir bo'lak

oli n...
avo...
a sodir

o'zg
LiCl
sodi

lg
3

ntiring,

Zn Har qanday idishda saqlash mumkin

Mahkam berkitilgan idishlarda saqlanadi

Tabiatda uchrashi

Li K Ba Sr Ca Na
Mg Al

Mn Zn Cr Fe Cd Co Ni Sn Pb (H₂)
Cu Hg

Ag Pt
Au

Faol

O'rtacha faol

Asl metallar

Пирит FeS₂

Халькопирит CuFeS₂

Киноварь HgS

Стронциат CuFeS₂

Mis kolchani

МАГНЕТИТ

ГЕМАТИТ

Корунд

красный железняк Fe₂O₃

магнитный железняк Fe₃O₄

ПИРИТ

СИДЕРИТ

медный блеск Cu₂S

Флюорит

Bir xil rudalarni toping

Faol Me rudalarini kimyoviy formulasi qanday?

Gips

Rubin

Sapfir

Metallarni olinishi

Qaytaruvchilik xossasining kamayishi

Li K Ba Sr Ca Na Mg Al Mn Zn Cr Fe Cd Co Ni Sn Pb (H₂) Cu Ag Hg Pt Au

-ē

-3,02 -2,91 -2,84 -2,38 -1,05 -0,74 -0,40 -0,23 -0,13 +0,34 +0,85 +1,50

-2,93 -2,89 -2,71 -1,66 -0,76 -0,44 -0,28 -0,14 0,00 +0,80 +1,20

+ + 2+ 2+ 2+ + 2+ 3+ 2+ 2+ 3+ 2+ 2+ 2+ 2+ 2+ + 2+ + 2+ 2+ 3+

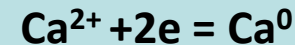
Li K Ba Sr Ca Na Mg Al Mn Zn Cr Fe Cd Co Ni Sn Pb (2H) Cu Ag Hg Pt Au

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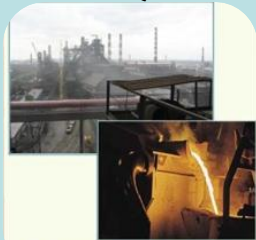
Oksidlovchilik xossasining oshishi

Metallurgiya – bu metallarni rudalardan sanoat usulida olish haqidagi fan bo'lib, shu bilan birga sanoatning yo'nalishi hamdir

Har qanday metallurgiya jarayoni – bu turli qaytaruvchilar yordamida metal ionlarini qaytarilish jarayonidir



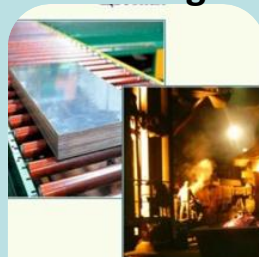
Qora



Металлургический комбинат

Fe va uning qotishmalarini ishlab chiqarish

Rangli



Производство алюминия

Boshqa Me va ularning qotishmalarini ishlab chiqarish



Metallarning olinishi

Li K Ba Sr Ca Na
Mg Al

Mn Zn Cr Fe Cd Co Ni Sn Pb (H₂)
Cu Hg

Ag Pt
Au

Faol metallar piroelektrometallurgiya usulida olinadi

O'rtacha faol metallar

Asl metallar

Elektrometallurgiya – bu elektr toki yordamida (elektroliz) metallarni olish usulidir. Ushbu usul bilan faol metallar - oksidlar, gidroksidlar, tuzlarning suyuqlanmalaridan olinadi.

Na, K ni olinishi

Suyuqlanmalari elektrolizi

