3 54

1. .

2. 4

2 2

3. 3 4 2 3

4.

2 +2 2 2 +2 -+ 2

2

2+ +2 -+2 ++ 4 2- 4 +2 2 2 3+ + =3 2+

5. 2 2 1

2 1 2 2 + 1 2

3*N* 1 2 1 2+ 1 2 2*N* 1

2 2 2*N* 3*N* 4.48 3

2 $\frac{4.48}{22.4\ /}$ 0.2 0.2 *N*

0.1 *N*

6. 4- $\frac{(\ ^{+})}{(\ ^{-})}$=1 10-11 4+

+ 3 2+

7. 2

9.

10.

$$CO(g)+H_2O(g) \rightleftharpoons CO_2(g)+H_2(g)$$

H !•

E $2.02eV$

11.

$2 \rightleftharpoons 4$ 0

5 0.01 1 1

5 0.01 1 1

0.01 1 1

K ( ) K ( )

12.

$0.3\,mol\cdot L^{-1}\cdot min^{-1}$

×

0.5 0.8 0.8 0.25 1 1 0.4 1 1 0.4 1 1 =10

13. 催化剂

3

15. 7.8 2 2

2.7 0.1 2 0.1

0.05 2 0.1 2 3

( )3 (=2 2 2

2 0.1 =0.2 (0.2 /0.1 2 1

16.

2 2

2+4 +4 += +2 2+2 2 200 18 1 1 2 4

1.8 142.2

17. 2+

2+

2+

2+

+ 2+ 2++

18.

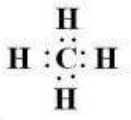
$$n(\quad)\quad n(\quad)$$

$$/\qquad \frac{(\quad)\ (\quad^{-})}{(\quad^{-})}$$

46

19. 9

1 122.5 1 1

2  1 1

3 2 2+5 2++6 2 =5 2 +12 ++2 - 2

2. 96 10-3 -1 2 1

3 3 3 122.5

2 10 4 2

2 3 2 4 - 2

2 2+5 2++6 2 =5 2 +12 ++2 -

200 1 2 $\frac{0.2g}{67.5g/mol}$=0.00296 1 2 2. 96 10-3

-1 2. 96 10-3

-1

20. 14

1 1 1 1

2 2 1

3 1 $\frac{40}{233}$ 2 1

3 1 1 1

4 1 4强热 + 3 2

1 70 -80

2 2- 4 2

4 2

3

2

4 4 (4)= (4)=$\frac{}{233}$

(4)=$\frac{n}{V}=\frac{\frac{w}{233}}{25\ \ 10^{3}}$ -1=$\frac{40}{233}$ 1

4

4 (4)

3

4

4 5 2

4

21. 10

1 1

+2 3 2 +2 4+= (3)42++3 2 2

2 1

(3)$2AsCl_5^{2-}+2H_2O_2+6NH_3\cdot H_2O=As_2O_5$(胶体)$+10Cl^-+6NH_4^++5H_2O$ 2 2

4 1 4 7 2 1

1 $NH_3\cdot H_2O$ NH_4Cl $Zn(NH_3)_4^{2+}$

+2 3 2 +2 4+= (3)42++3 2 2

3 $AsCl_5^{2-}$ As_2O_5

$2AsCl_5^{2-}+2H_2O_2+6NH_3\cdot H_2O=As_2O_5$(胶体)$+10Cl^-+6NH_4^++5H_2O$ 2+

4 28.70 4 7 2 0.01mol 680℃ 13.43g

$Zn_3O(SO_4)$

4 7 2

22. 13

1 -1807.8 -1 1 1

2 1050 2

40% 2

3 1

1

2

0.0225 1 96% 2

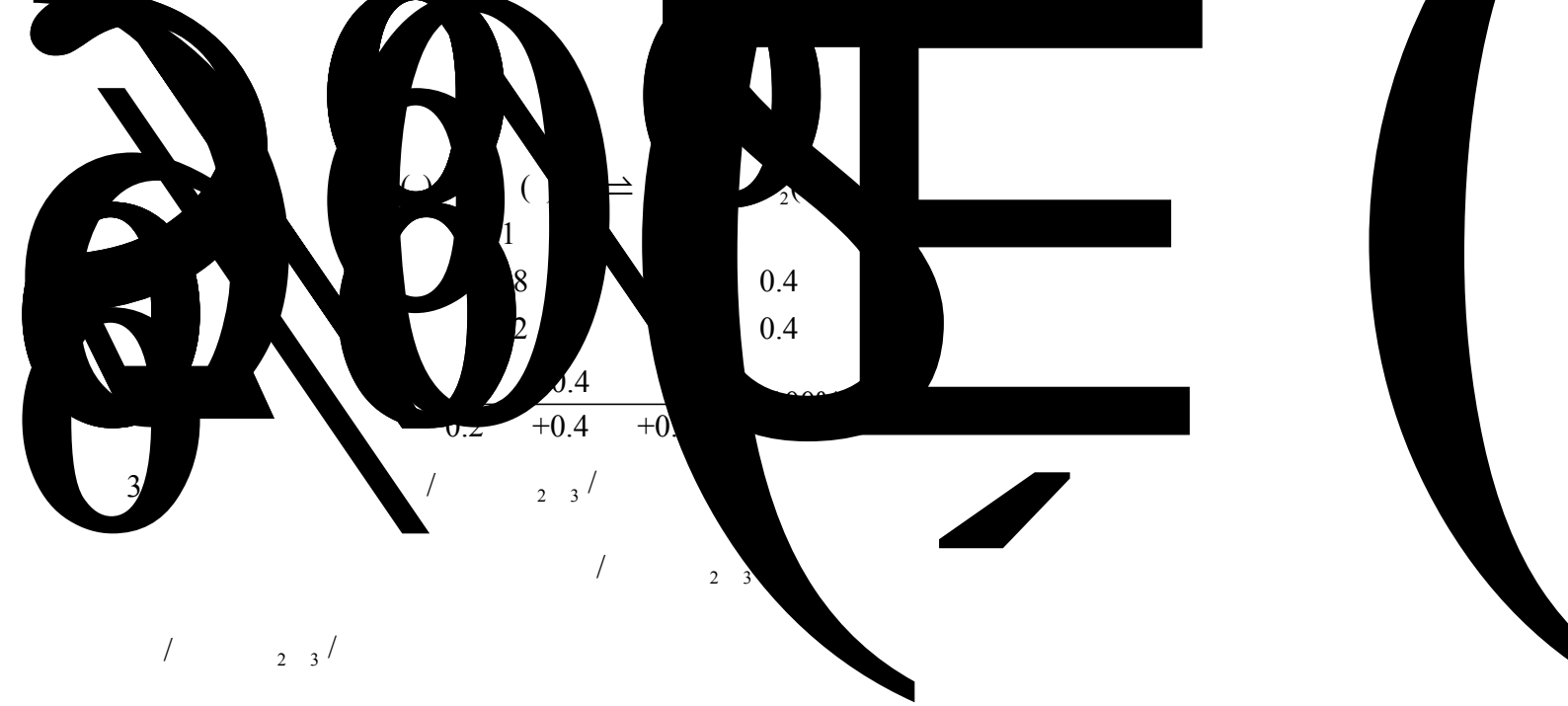
1 2( )+ 2( )=2 ( ) 1=+180.4 -1

4 3( )+5 2( )=4 ( )+6 2 2=-905.8 -1 = 2-5 1=-905.8

-1-5 (+180.4) -1=-1807.8 -1 <0, <0

2 1050

80%



490 45% 60%