

附件

一、总体目标和安排

2022

二、领域和方向

39

1.1

1~2

1

2

2

2

10

3

1

1.

CCUS

1.1

$\leq 10\%$

200 kW

$\geq 88\%$

$\geq 80\%$

≥ 10 /

≤ 250 /

1.2

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-

-

-

-

-

20%

40%

20%

50%

1.3

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CCUS

1

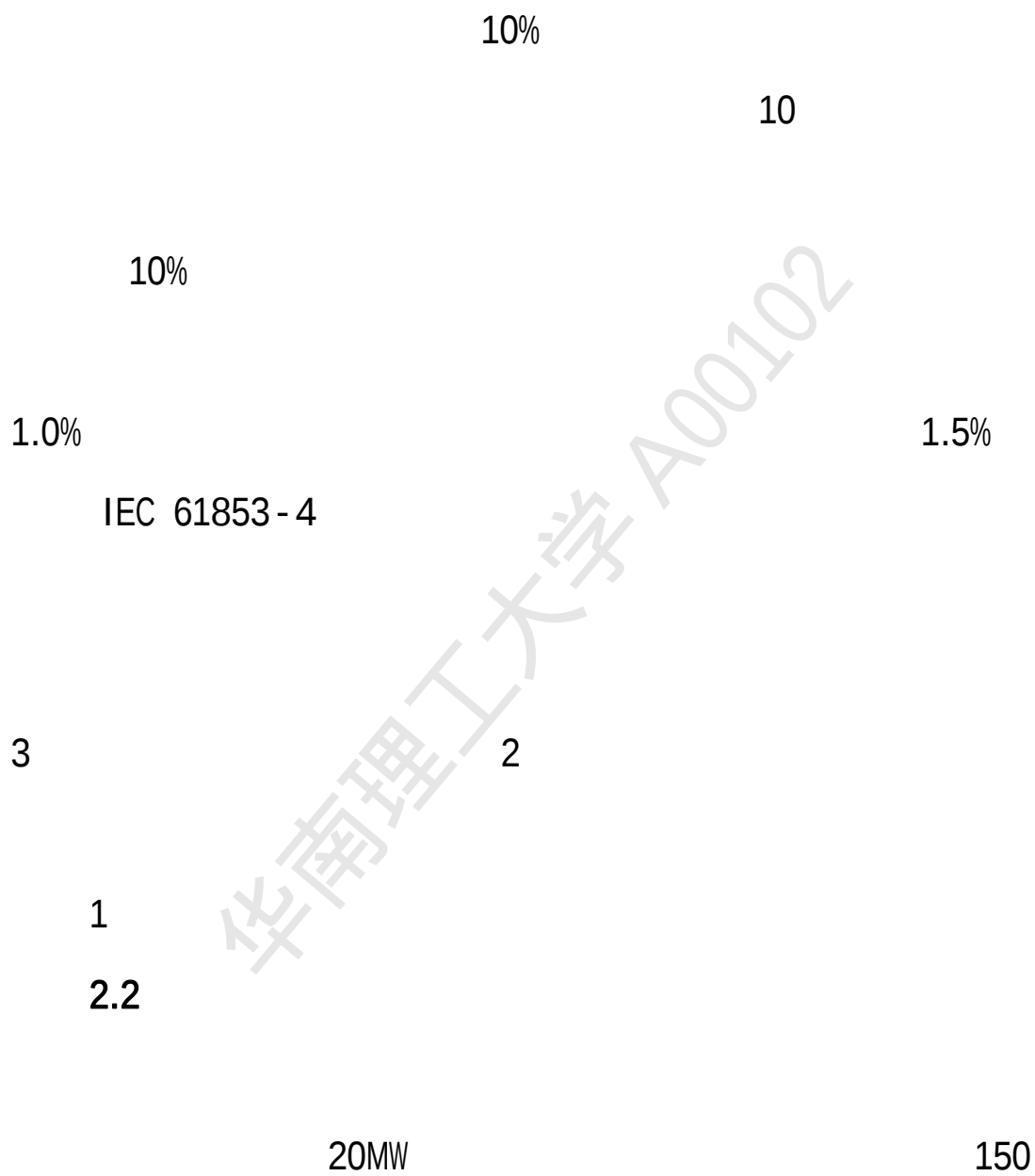
1

K

2.1

U•1 U Ž

F # 3



1

2

3

4

5

150

5%

5

5%

2.3

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100 / , 8

1

(BD100)

GB/T20828 - 2007

90%

3.

3.1

/

/

/

“ ”

3

/

/

-

60%

30

/

/

600

-100

90%

3.2

3.3

AGC

AVC

1%

200

10

IEEE

2

3.4

1

2

3

4

— 2

1

2

3

kW - MW

—

—

—

—

—

1

4.

4.1

	1		$\geq 2.0\text{wt}\%$		$\leq$
65		$\geq 99.999\%$			
	2		3000		$\geq 80\%$
	3			$\geq 100\text{kg}$	
	$\geq 1500\text{SL/min}$	100kW			$\geq 12\text{h}$
	4			99.9%	
		4%		10	
		5			
	5				1
4.2	-				

/

≥ 1200 ≥ 2000
 $\leq 1.30 \pm 0.01$
 GDL ≤ 30 $\geq$
 ≥ 0.7 $\leq 23^\circ$ ≤ 0.18
 $\leq \pm 10$ 0.25
 $\leq$. /
 $\leq \pm 0.1$ 0.6 ICR
 ≤ 2.5 . +0.1 ppm
 pH=3 ± 0.1 80 ≤ 0.4 /
 3 ≤ 40 /
 1.6V vs SHE 3
 ≤ 25 . 1 -40 ~120
 35 /
 2~3

4.3 -

“ - - - ”

PEM

PEM

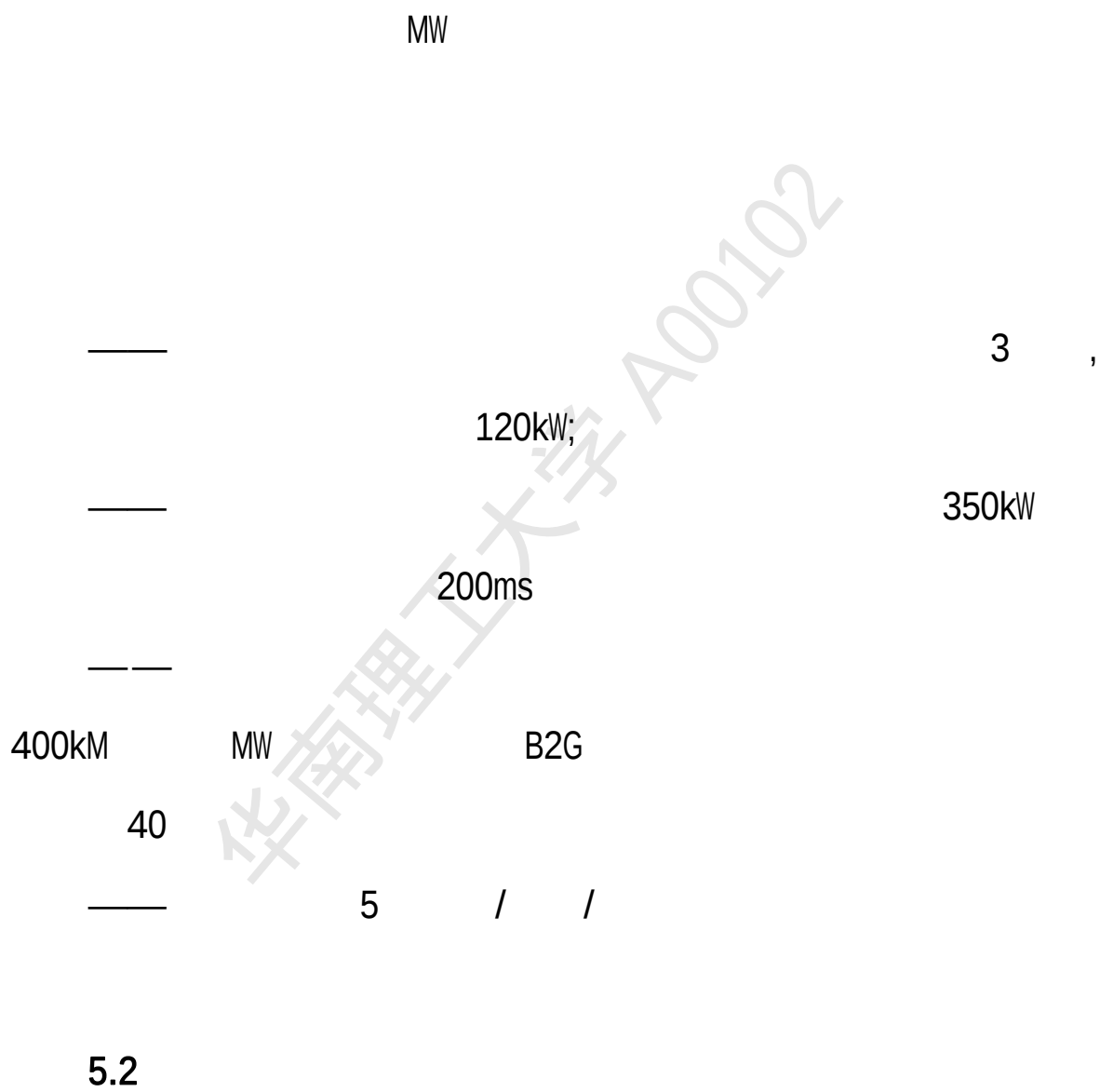
/

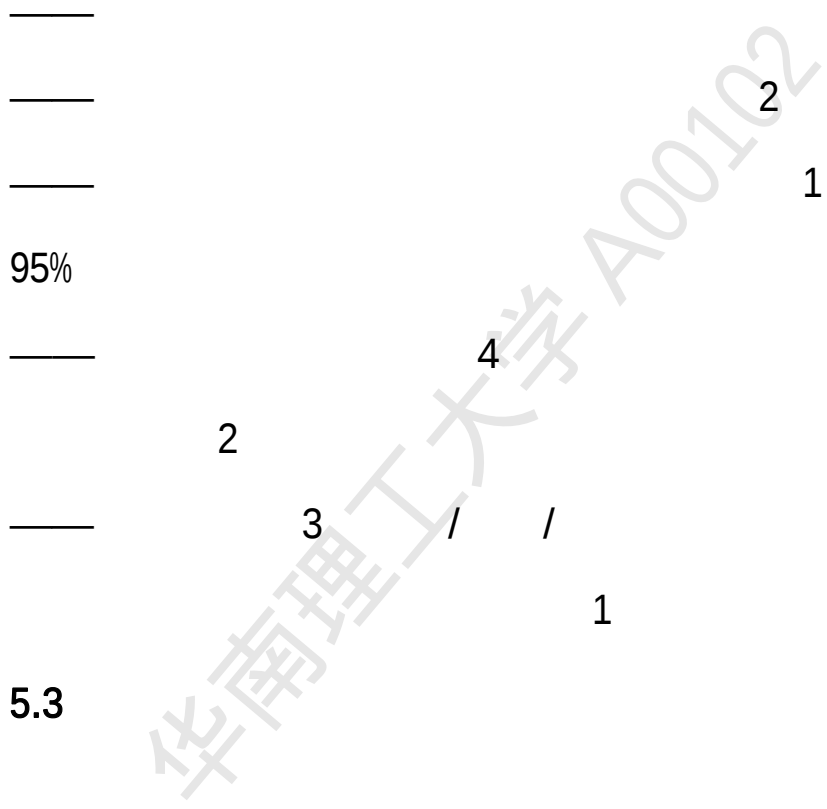
PEM

3-15

≥ 600 0.1 / 1.0-1.5 0.5
/ 20 ECSA 40%
 ≥ 200 / ≥ 1 /
 $\leq 10,000$ /
2
0.5 / 72
 ≤ 1.0 wt%() 0.1 /
ECSA ≥ 50 / MA ≥ 0.6 /
(0.6-1.0 0.1 /)10 ECSA MA
20%
 ≥ 500 $\leq$ Pt
• PGM wt% +50 /
20 / 1.5/2.0 $\leq 40\%/40\%$
(1) ≥ 1.6 / @ (0.65 ± 5
) (3) ≥ 2.0 / @ (0.60
 ± 10 ≤ 0.16 / ECSA
 $\leq 40\%$ ≤ 30 @0.8 / 0.6-0.95 , 3
 ≥ 10

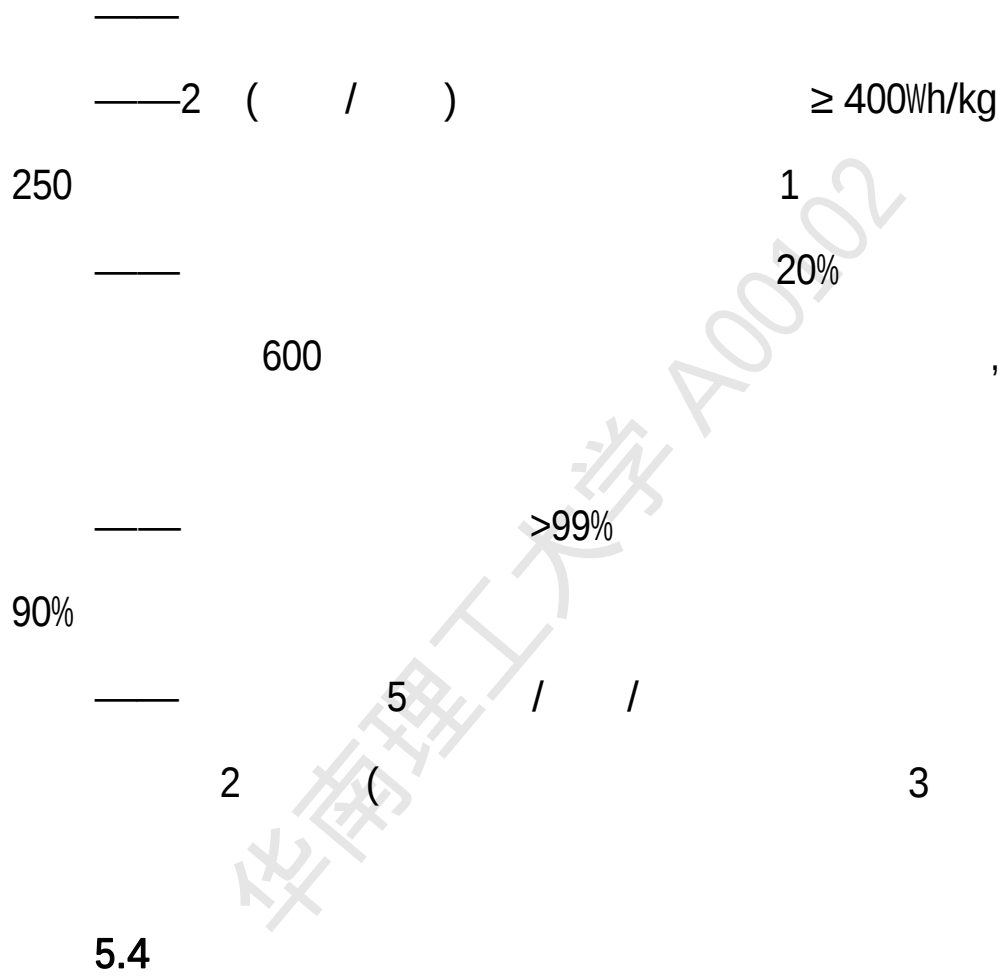
	≥ 2000		2%	
3				
		≤ 200	@10	/
	≤ 0.3	/		≤ 1.85 @2 /
	3000		$\leq 2\%$	$\geq$
200				$\leq \pm 15$
@2 /				
		≤ 350	@10	/
		≤ 1.5	/	≤ 1.80
@500 /		500	/	
1000			$\leq 10\%$	
4			30	
5.				
5.1	/		V2G	
	/		V2G	





“ -

”



/

— 3

—

—

—

≤ 0.20

$\leq 63\text{dB}$ A

5

/

/

3

6.

6.1

20%
2 - 3
5%
2 - 3
80%
6.2

1

25%

25%

≥ 300kg

2

3

1

2

2

6.3

/

2~3 /

10%

2~3

2~3

2~3

/

1

6.4 “ ”

/

“ ”

/

“ ”

/

2

1-2

“ ”

“ ”

1

“ ”

1 1-2 “ ” /

“ ” /

1 /

1

7.

7.1

1

2

3

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4UŽ04! 1\$)Bq, XDC'46 6

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B04F9 9? 9

n•mB(08Q5(

0 "

l sf -9 -9'9 -9 9 9D05 4U0 022S5(9 1Q,4+D

+D . 4U0 022 S5(+D

5

2

6 4

7

8

2

7.2

1

2

3

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4

5

/

1

2

2

1

1

3

1

/

4

30

20

;

5

1

5

3

3

3

$$6 \quad 2 \quad /$$

30%

7 3

8

9

3

7.3

1

2

3

4

5

6

1

2

3

3

3

1

4

1

5 2

30%

6 3

7

8

2

8.

8.1

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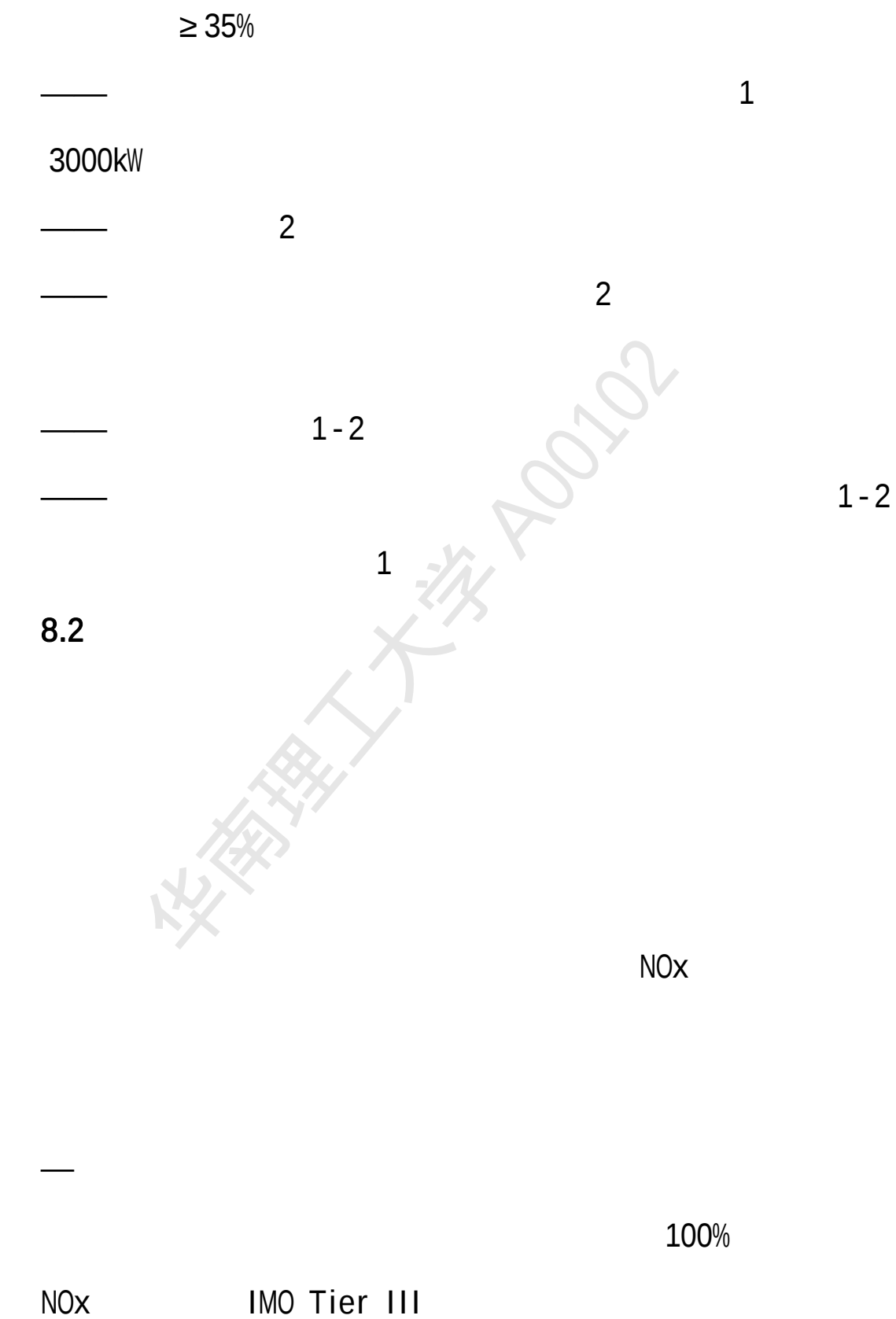
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1-2

$\geq 90\%$

——

100



— /

1

— 50%

— 2

—

1 - 2 1

9.

9.1

-

”

“

”

“

/

/

-
1. 20 2010 - 2021
 $0.5^{\circ} \times 0.625^{\circ}$ 2.
 25% 25% 3.
 20% 4.
 $1 \times 10^{-6} \text{mol/mol}$ 0.1mol/mol 0.15% 0.30%
 5. 2010 - 2021
 80% 15% 6.

9.2

20% - 40%

9.3

1

2-3

2-3

1-2

/

5

1

35

5

1:5

5

10

6

9.4

2020

1.

2

2.

3

3.

3

9.5

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30% 1

≤ 1

≤ 20

10.

10.1

3-5

3-5

4-6

3-5

1-2

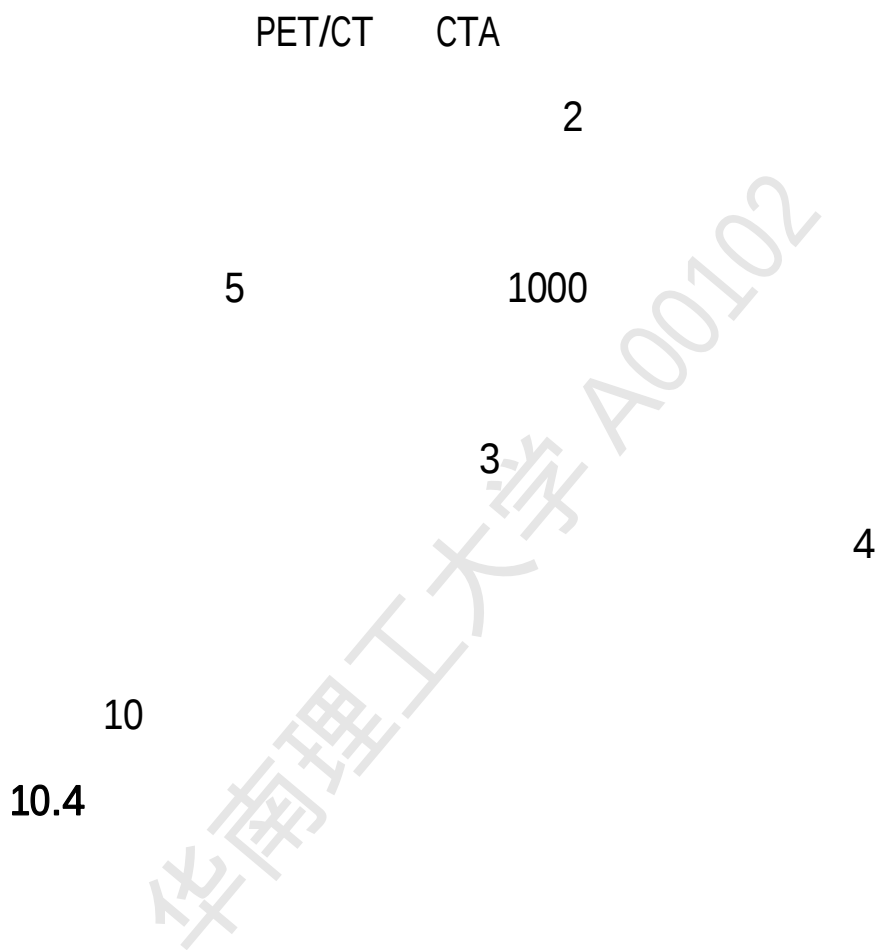
10.3

“ ”

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PET/CT

CTA



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FH

FH

10000

≥ 3

/

5

2

50

1

1

“

”

“

”

10.5

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1-2

1-2

1-2

10.6

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2-3

2-3

2-3

10.8

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2000

2

3

2

1

5000

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