

“变革性技术关键科学问题”重点专项
2020年度项目申报指南
(征求意见稿)

2020

7

1.

1m
>60%
30MPa 1 >1000Nm³/h
30% SO_x NO_x PM2.5
CO₂
2.

±5%

3% 1600mm×1050mm

×160mm 200nm 90%

0.17J/cm²

3.

3 1500W/cm²

50mm 50mm 15mm

2.5kW

10

4.

DRAM

SOT-MRAM SOT-MRAM

DRAM

	SOT		
	SOT		SOT
		CMOS	SOT-MRAM
			1 2
SOT			SOT-MRAM
		DRAM	1
	<5ns	<10pJ	>10 ¹²
	SOT-MRAM	16Kb	<90nm
5.	EDA		

ANSYS	3
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MAGIC	CST	2
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6.	X
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X

X

X

2

>25cm²

90000

170 400 3000nm
 ×1000mm 8%

9.

CO₂

C-O

C-H

C-C

/

CO₂

/

CO₂

/

CO₂

3

2

CO₂

/

CO₂

CO₂

/

2

CO₂

35%

10.

— /

0.14eV

90%

(ITU)2020

11.

2 3

CO₂

5%

70W/m²

0.27kg/(m² day)

12. 1

1

0.1

>1 >99.99% >90%

4 50 /

30

100 1310 1550

13.

/

>2cm² >3.0GPa >70GPa

>0.7

>150000

60

100GPa

1

4GPa

14.

- - -

50MPa

500W

50MPa

200MPa

20

15.

Pt-Os

Hf-W

-

-

Re-Os

^{190}Pt - ^{186}Os ^{182}Hf - ^{182}W
 $^{186}\text{Os}/^{188}\text{Os}$ $^{182}\text{W}/^{184}\text{W}$ 10ppm
5ppm Re-Os Re Os
0.5% $^{187}\text{Os}/^{188}\text{Os}$
5%
3% 5%
10% 4 6
16.

17.

/

/

/

1

2

3

2 1 2

3

4 5

4

3 5

2 3

/

/

18.

/

1

10

2

10~15

3

3

1

50

19.

SPECT

^{18}F FDG/PET

SPECT

SPECT/CT

20

^{18}F FDG/PET

1

$^{99\text{m}}\text{Tc}$

1

2

SPECT/CT

2a)

SPECT

<2mm

2b)

SPECT

5

2c)SPECT

>48cm >30cm 2d)CT
 >20lp/cm@0%MTF 2e CT
 0+3HU -1000+10HU
 20.

AD

AD
 AD 0 1
 1
 2 3 AD

2 3 5

3 1 2

21. (EDA)

3

5

5

5

5

22.

;

(MultilevelDSMC)

DSMC

20%

23.DNA

DNA

DNA

DNA

DNA

DNA

DNA

DNA

DNA

DNA

DNA

DNA

DNA

1.5

5

DNA

DNA

DNA

24.

CT

CT

CT

1/10

CT

1.5

2×2

40

25.

5G

(PIR)

GCD RLWE

5G

5G

15% 30%

128

30

100

Helib

10

CCA2

Brakerski

1 2

40%

80%

26.

—

;

E

-

60

400

11

7

E

10000

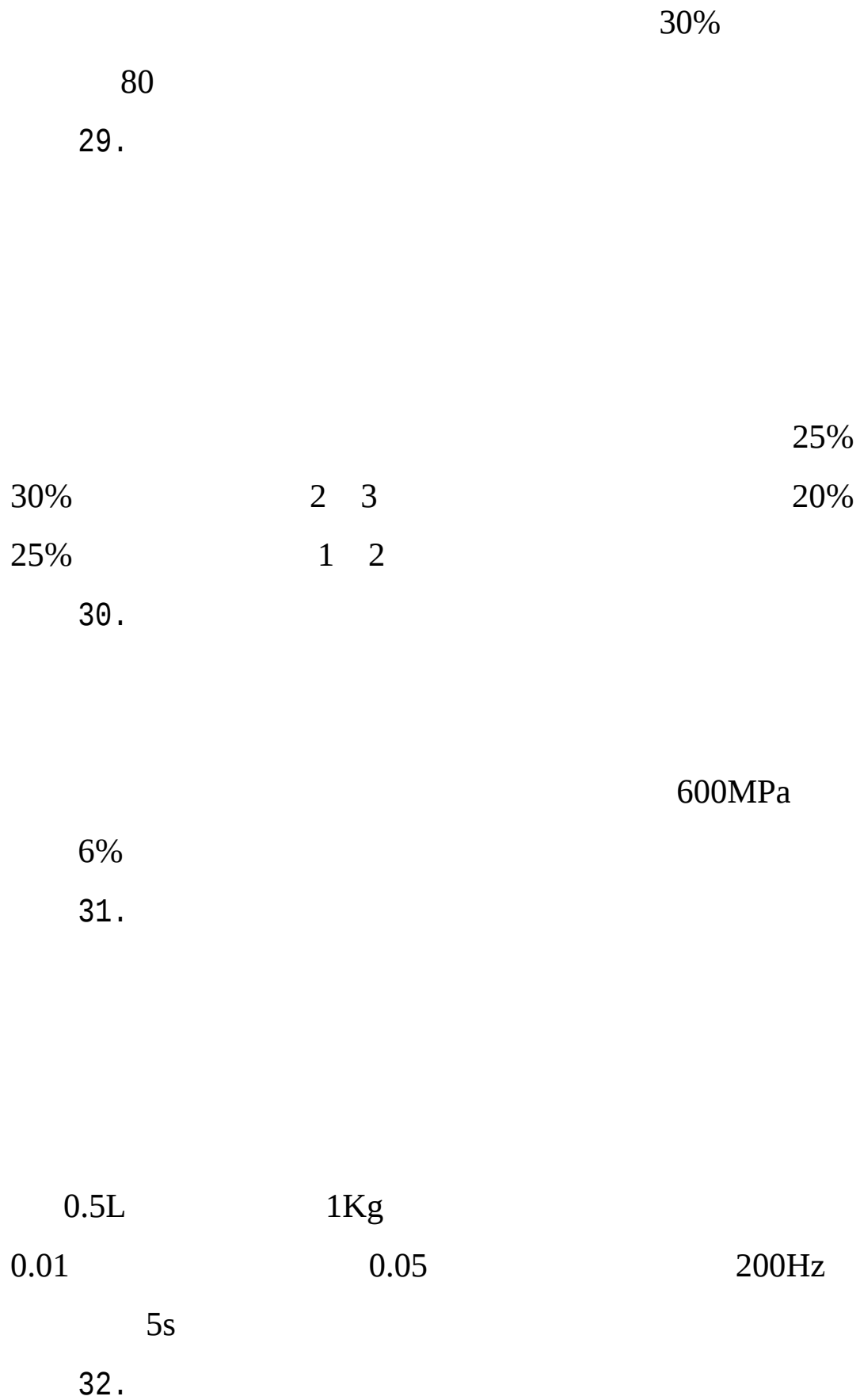
50PFlops

7

28.

1GPa

0.005



FPGA

33.

34.

35.

36.

COP >10

>4W/g

60mW/cm²

0.5

37.

—

Biefeld-BrownEffect

2kgf

20kV

500mA

38.

39.

40.

41.

1

2

3

42.

BSD

GL(n) Iwasawa

L-

Deligne

L-

p- L-

Lefschetz-Verdier

43.

SLE

Malliavin

44 .

Kahler-Ricci
flip

Thurston

45 .

Hopf

46.

47.

p

P

Kodaira-Spencer-Kuranishi

P

p

Hodge

Monge-Ampère

Yang-Mills

Yang-Mills

48.

Hodge Tate Abundance
-
- BCOV

K-

49.

Floer Maslov Reeb
Hamilton
Hamilton
Hamilton