

J P A R C

### Science

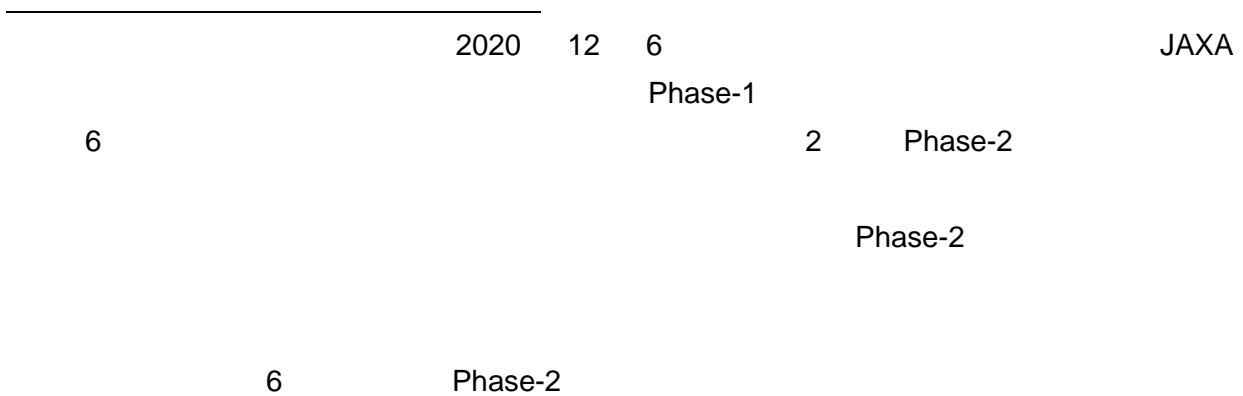
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Science 2022 9 23

Formation and evolution of carbonaceous asteroid Ryugu: Direct evidence from returned samples

Science

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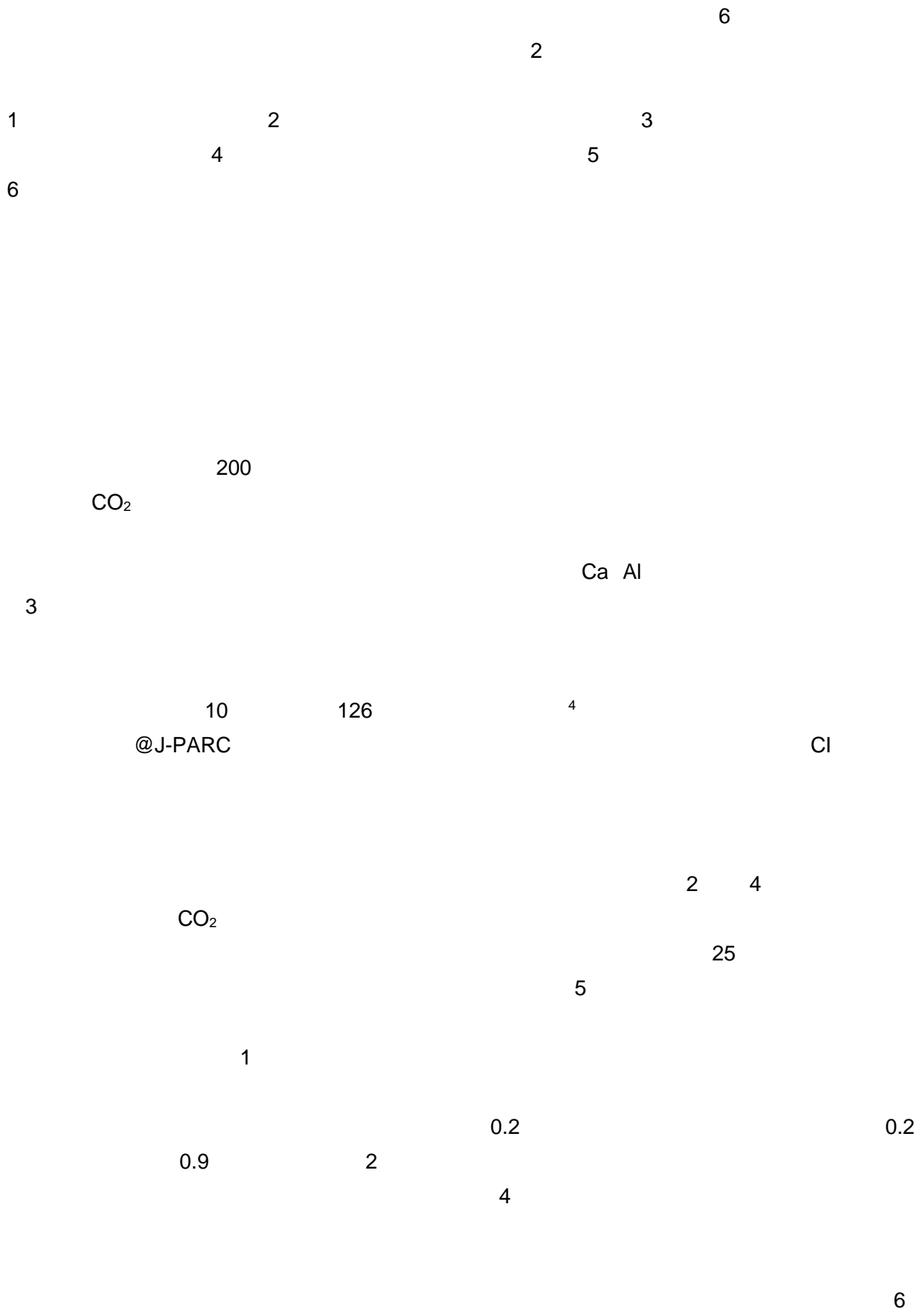
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Formation and evolution of carbonaceous asteroid Ryugu:  
Direct evidence from returned samples



1

CT

@SPring-8

1.79

0.08

<sup>3</sup>

1.19

30

1

7

46

200

200

300

500

50

100

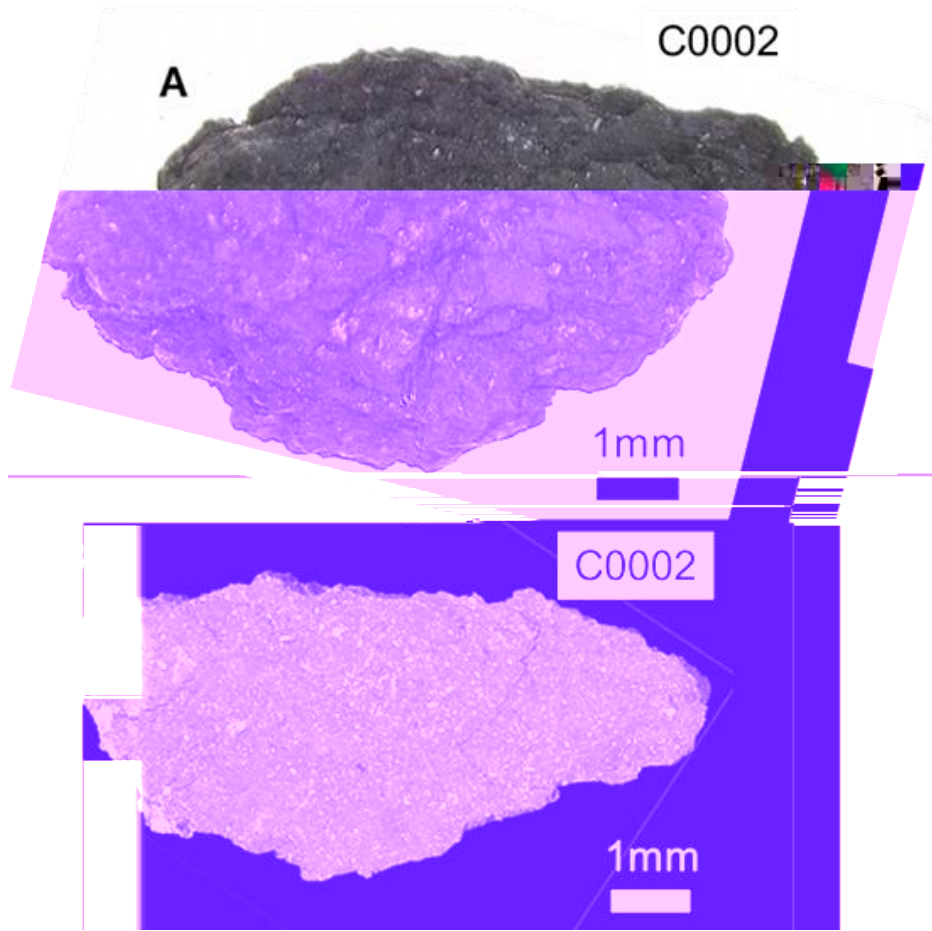
1/10

50

10GPa

0.2

2



© SPring-8

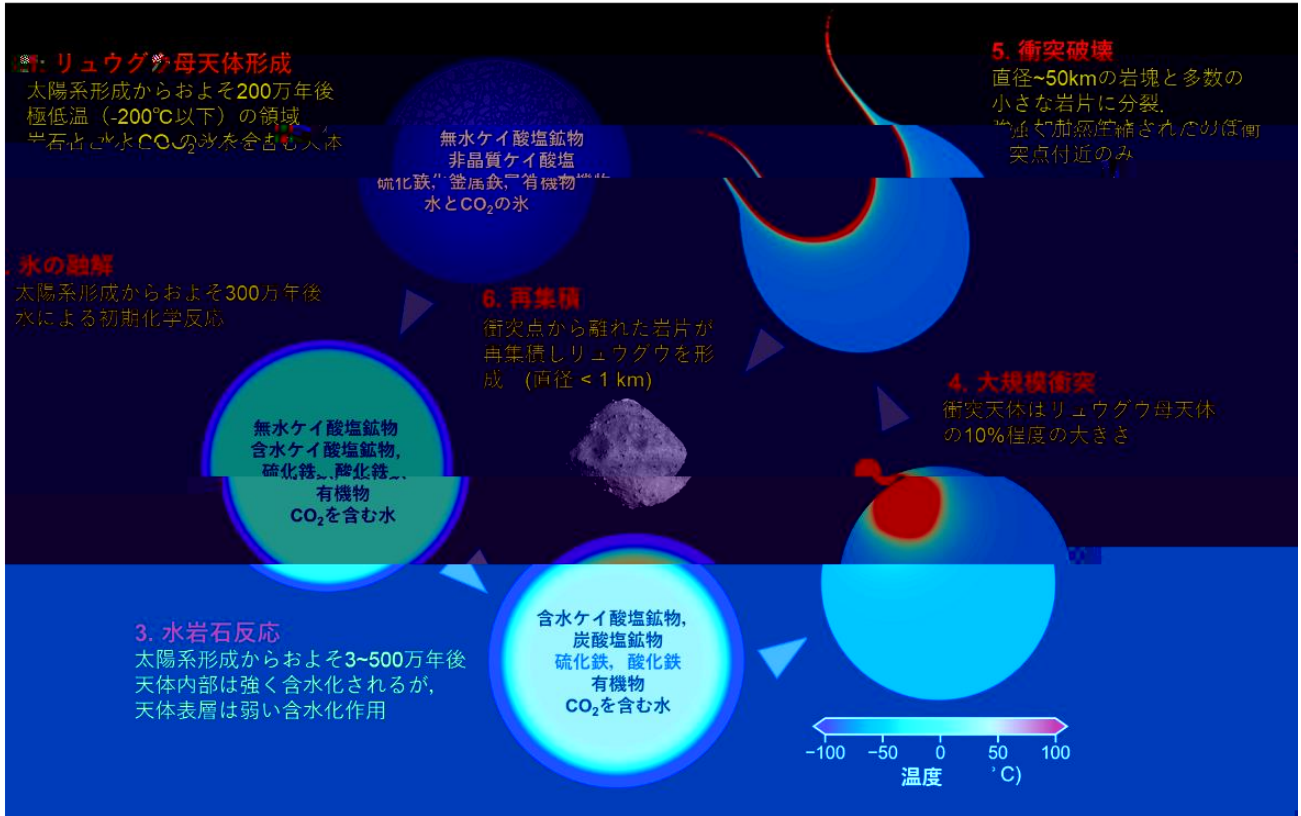
1 A

C0002

B SPring-8

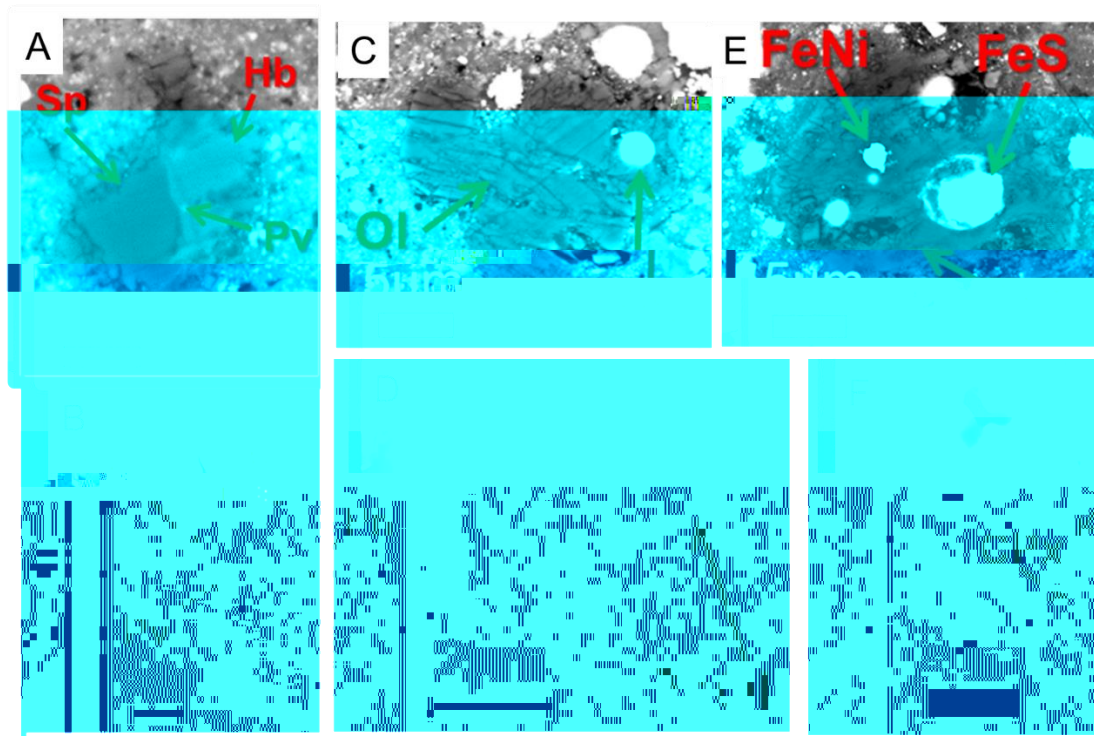
X CT

CT



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2



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3

B) Ca Al

B-D

1000

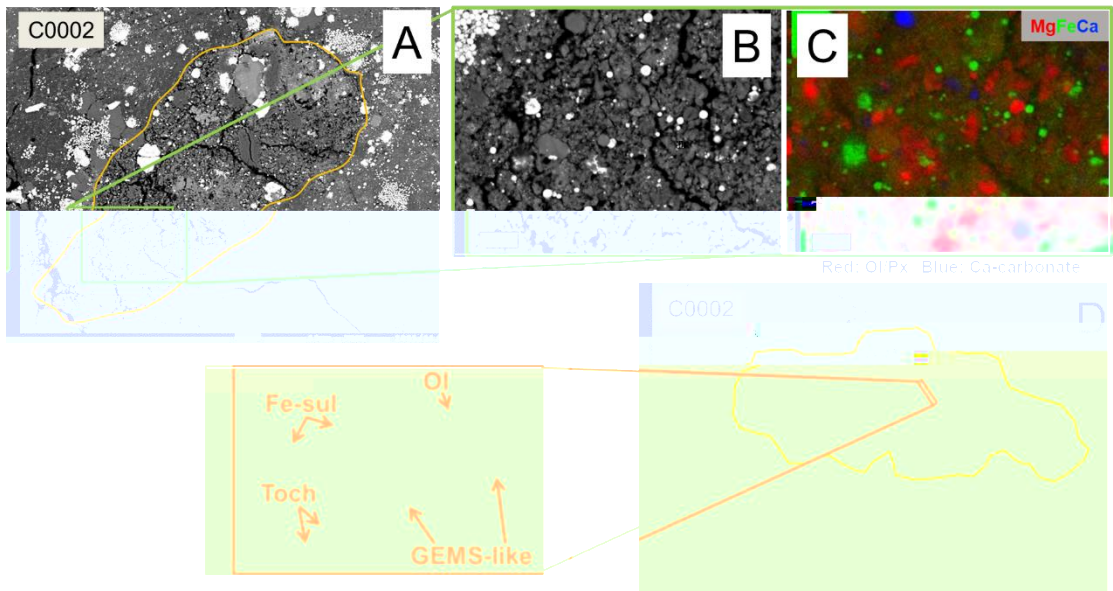
OI

FeNi

FeS

A

F



©

4 C0002

A

B

C B

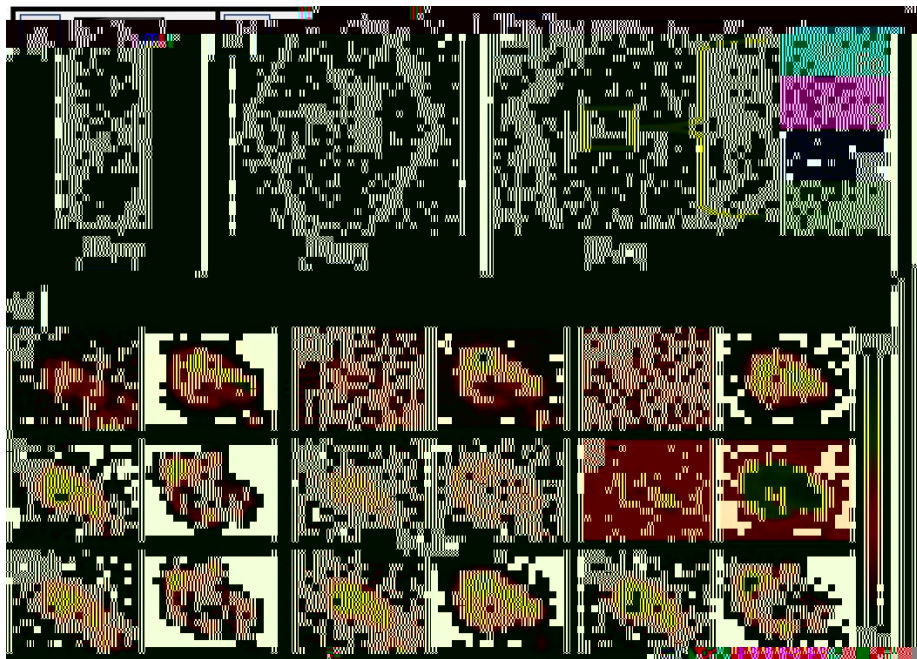
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E D

1

GEMS-like

Ol



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5

6

CO<sub>2</sub>

A B

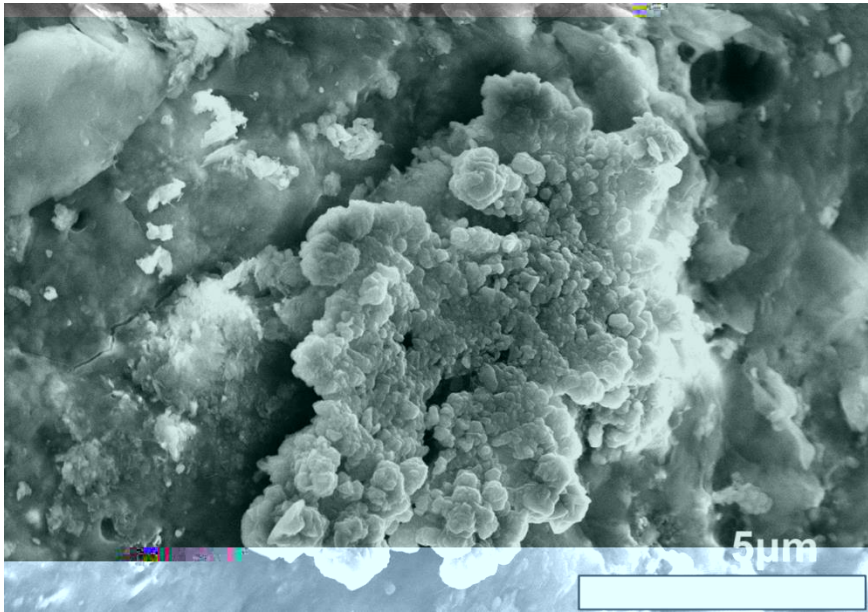
CT

C

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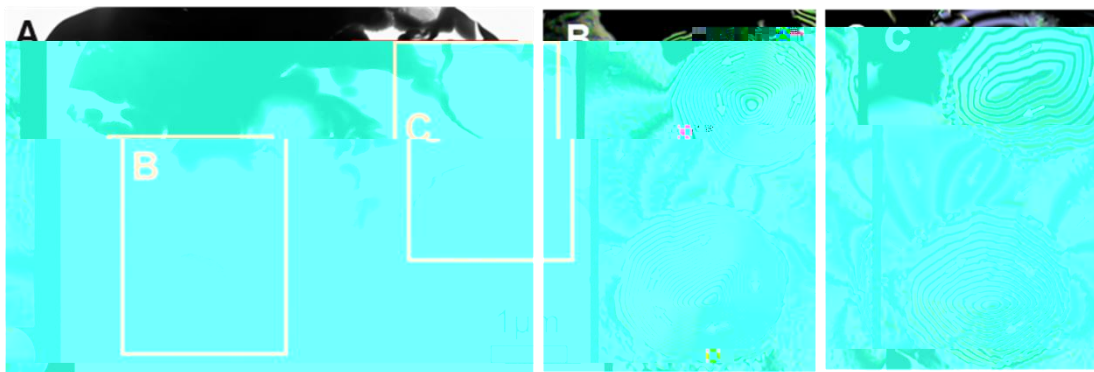
D





©

6



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7

$\text{Fe}_3\text{O}_4$

A

B C

1 Ca Al

2

100

3

45 6700

4

200

## 【論文情報】

雑誌名 : Science

論文タイトル : Formation and evolution of carbonaceous asteroid Ryugu: Direct evidence from returned samples

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