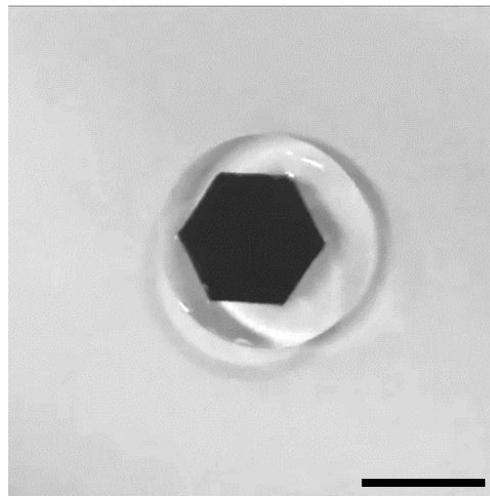


# 物体と流体を自在に操作： 新規レーザー駆動デバイスの創出



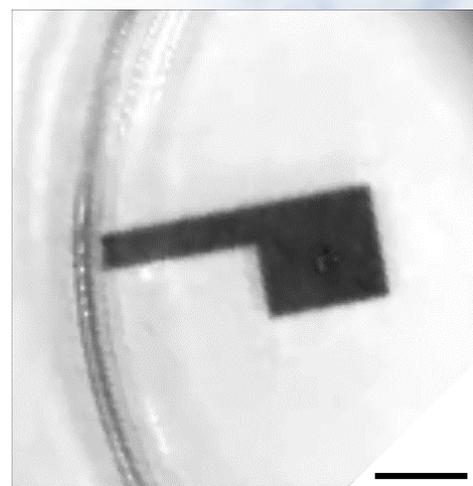
10 mm

直進運動



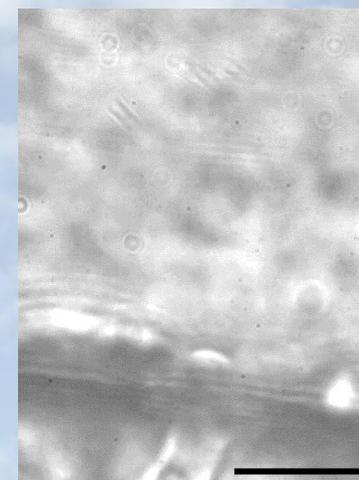
10 mm

回転運動



5 mm

振子運動

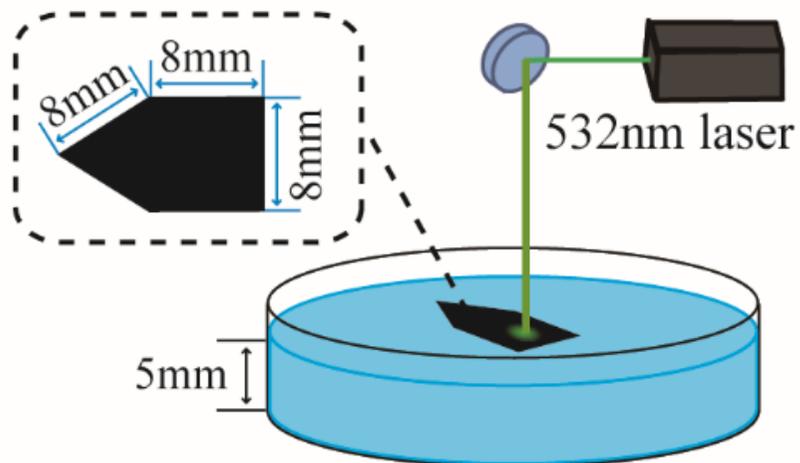


10 μm

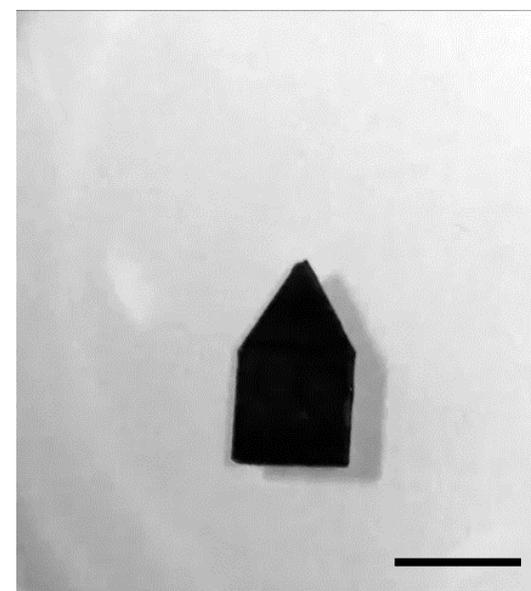
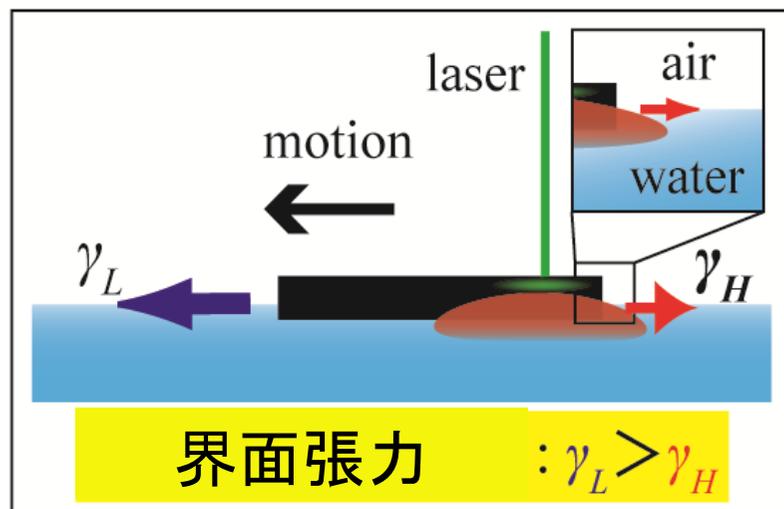
光駆動ポンプ

剣持貴弘、作田浩輝、長谷川よし乃、貞包浩一郎、吉川研一

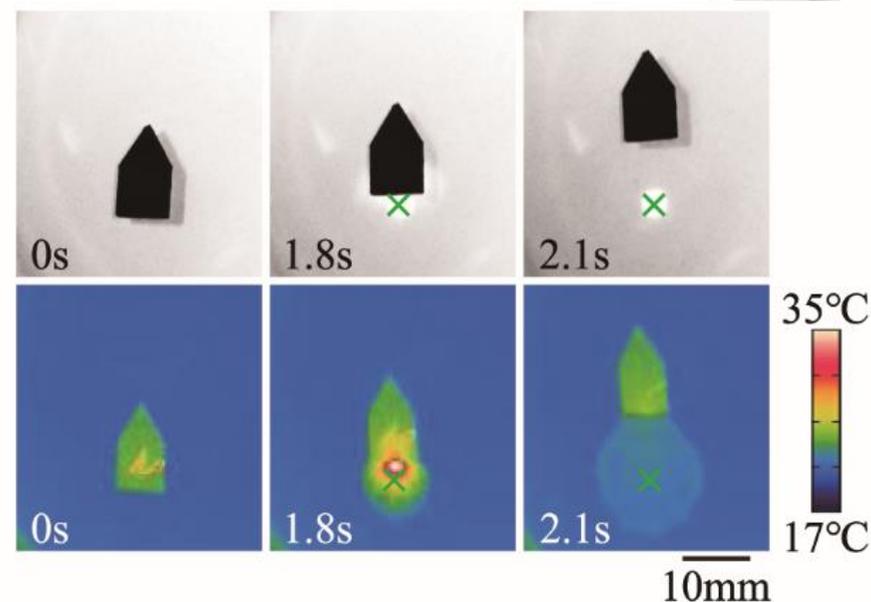
# レーザーによる物体の運動制御（直進運動） 1



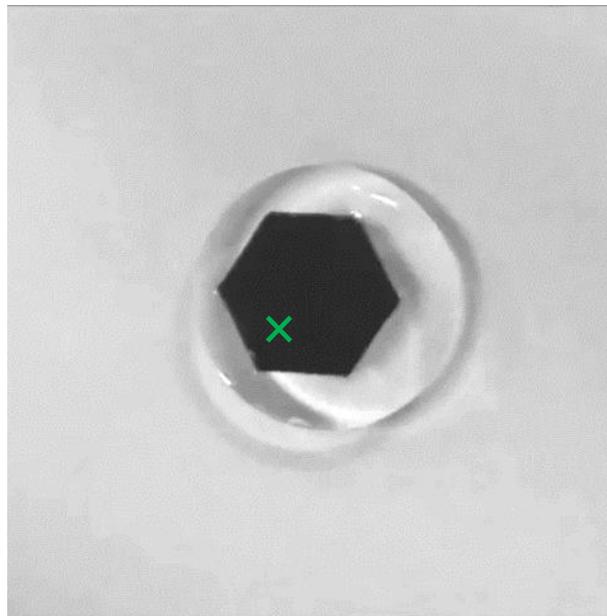
ボート型Alシート（厚さ: 11 $\mu$ m）



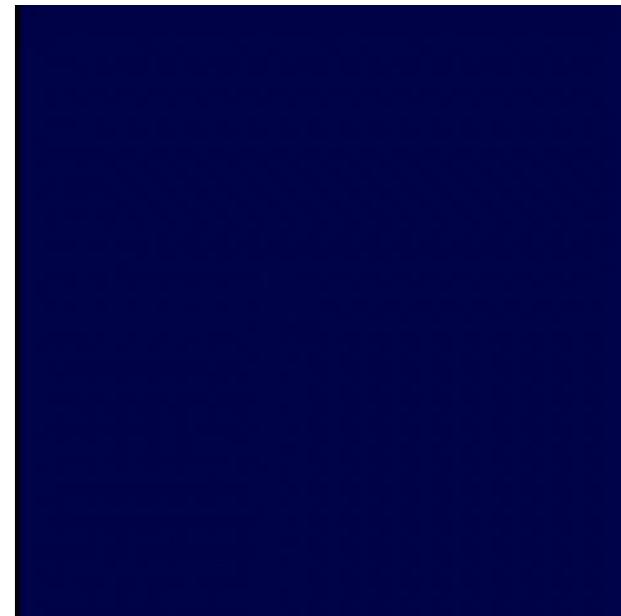
10mm



# レーザーによる物体の運動制御（回転運動）



10 mm



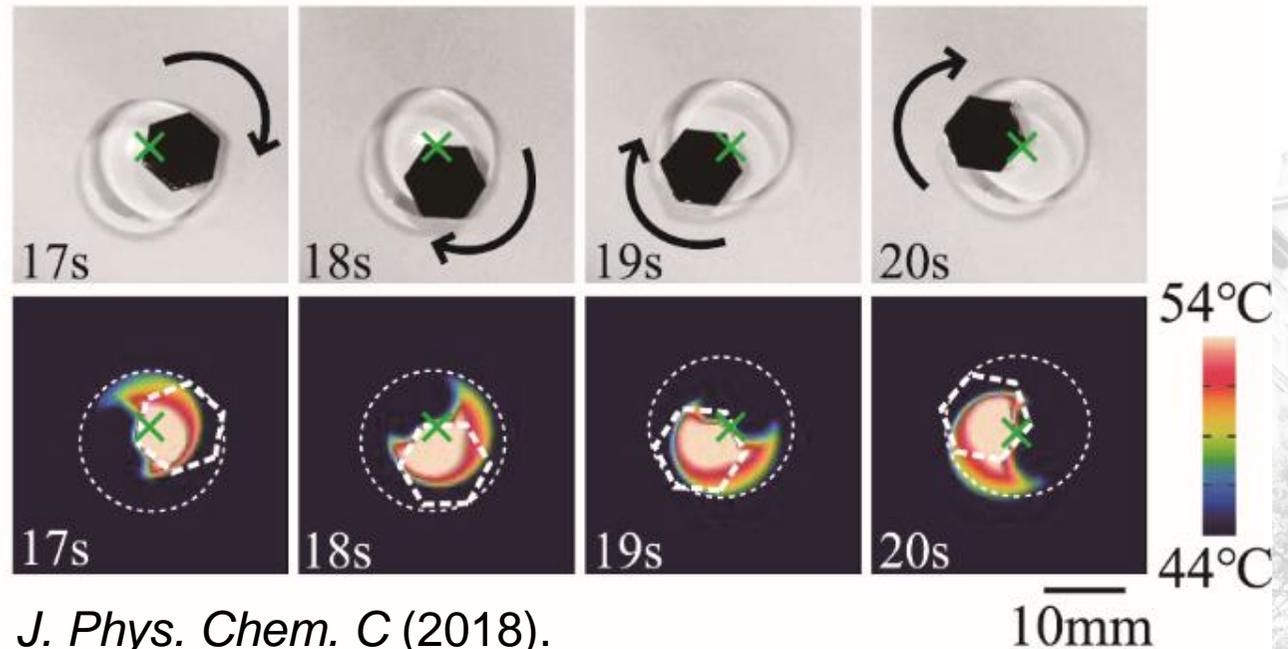
54°C

44°C

10 mm

オレイン酸の液滴に浮かべた  
六角形のAlシート

CW Nd:YAGレーザー  
(波長1064 nm : 0.87 W)



17s

18s

19s

20s

17s

18s

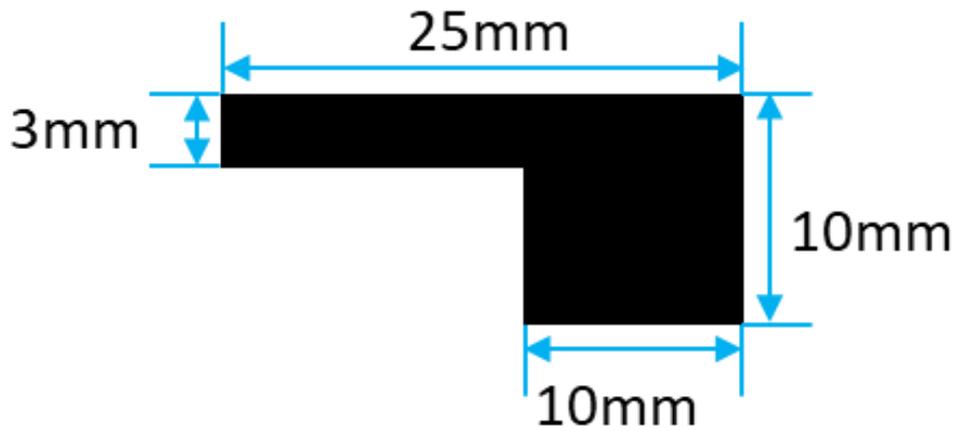
19s

20s

54°C

44°C

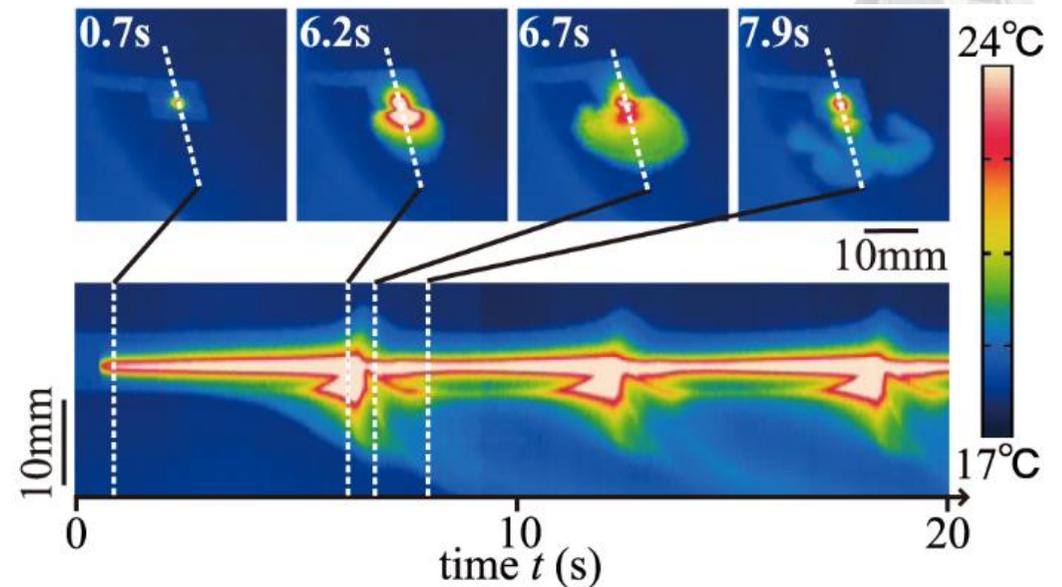
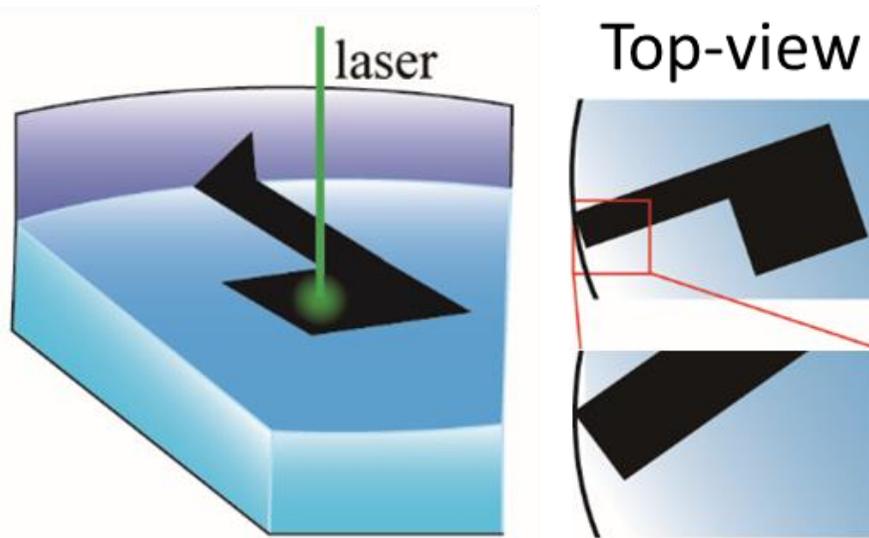
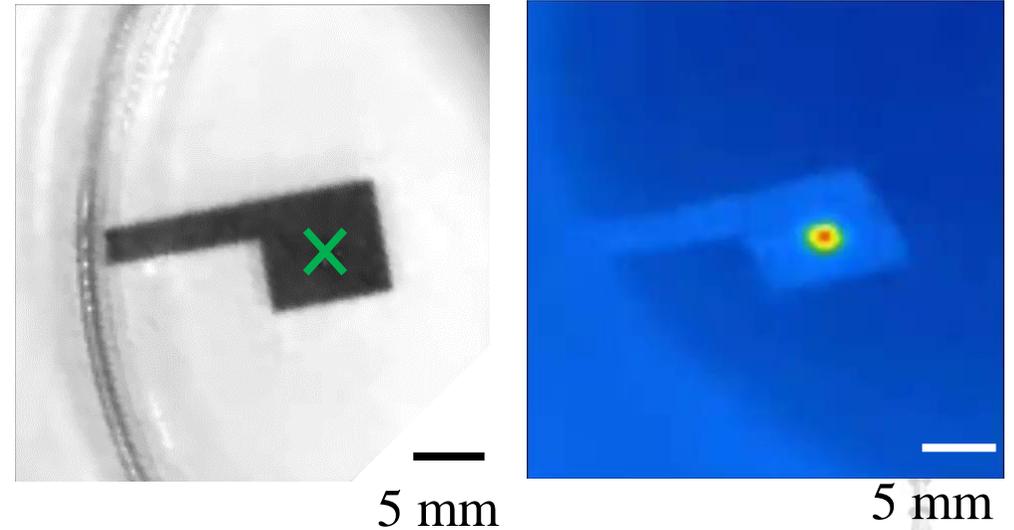
10mm



ハンマー型Alシート (厚さ: 11 $\mu$ m)

レーザー出力: 0.45W

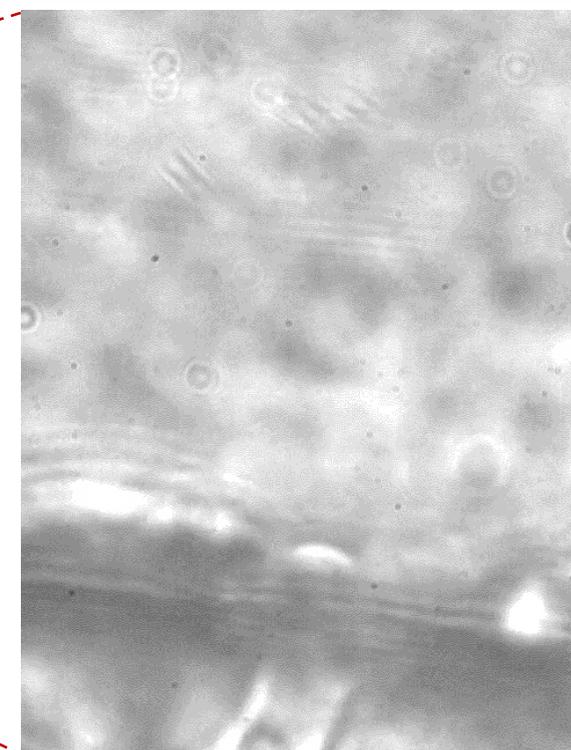
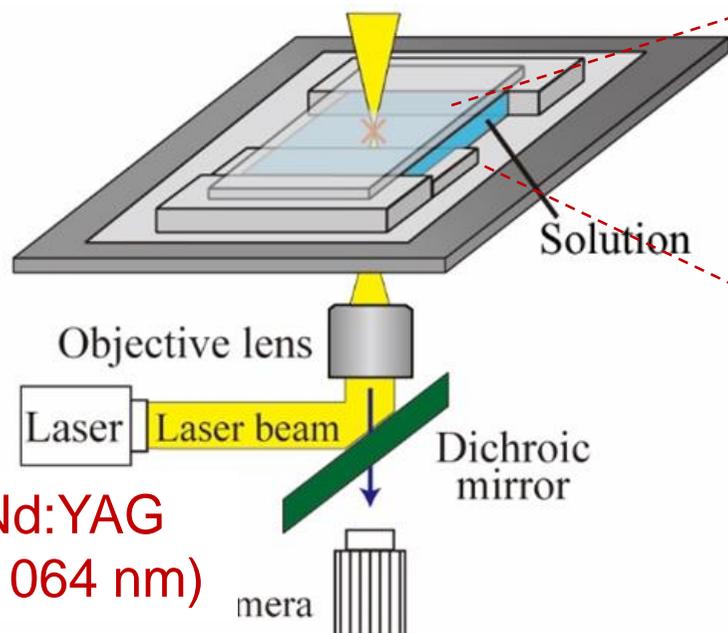
2倍速再生



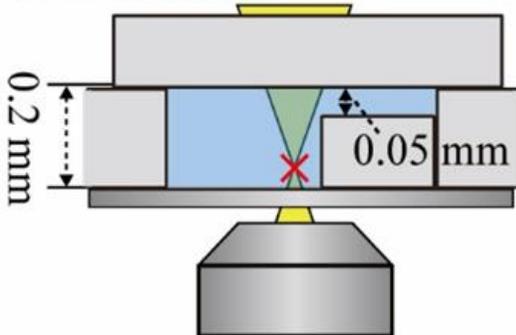
# レーザー駆動ポンプ

水/トリエチルアミン混合液 (体積比1:1)

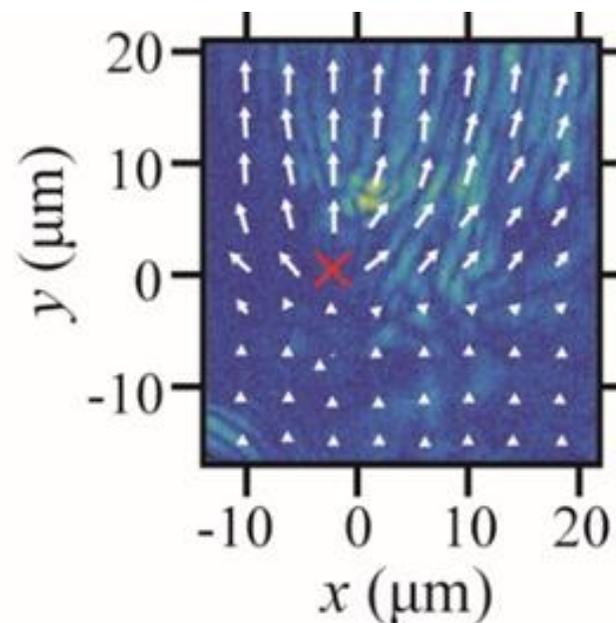
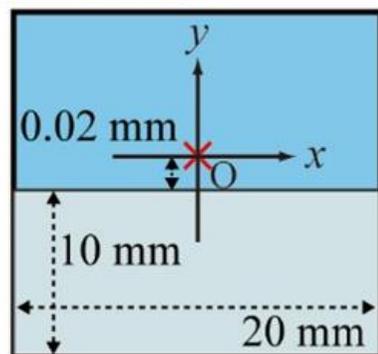
(a)



Lateral View



Bird View

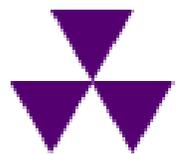


10 μm

ご清聴ありがとうございました。

小間番号：M-45

問い合わせ先



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