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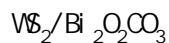
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*B01J 27/232* (2006. 01)

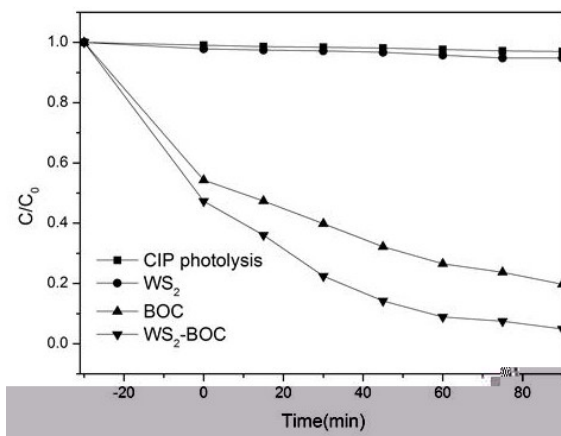
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(54)



(57)

$WS_2/Bi_2O_2CO_3$   
 0.105mmol  
 $WS_2$  1mol /L  $HNO_3$   
 A 4mmol  $Bi(NO_3)_3 \cdot 5H_2O$   
 B  
 C pH 9  
 180 1h  
 60 12h  $WS_2/$



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 $Bi_2O_2CO_3$   
 $WS_2/Bi_2O_2CO_3$

1.  $\text{VSe}_2/\text{Bi}_2\text{O}_2\text{CO}_3$   
 S1 0.105mmol  $\text{VSe}_2$  1mol /L  $\text{HNO}_3$   
 A  
 S2 4mmol  $\text{Bi}(\text{NO}_3)_3 \cdot 5\text{H}_2\text{O}$  A B  
 S3 B C C pH  
 9 180 1h  
 60 12h  $\text{VSe}_2/\text{Bi}_2\text{O}_2\text{CO}_3$
2. 1  $\text{VSe}_2/\text{Bi}_2\text{O}_2\text{CO}_3$

— WS<sub>2</sub>/Bi<sub>2</sub>O<sub>2</sub>CO<sub>3</sub> 光催 其

[0001] VS<sub>2</sub>/Bi<sub>2</sub>O<sub>2</sub>CO<sub>3</sub>

[0002]

Bi<sub>2</sub>O<sub>2</sub>CO<sub>3</sub>

Bi<sub>2</sub>O<sub>2</sub>CO<sub>3</sub>

3.1 3.5eV

Bi<sub>2</sub>O<sub>2</sub>CO<sub>3</sub>

Bi<sub>2</sub>O<sub>2</sub>CO<sub>3</sub>

[0003]

[0004] VS<sub>2</sub> ( 1.8eV)

[0005] Bi<sub>2</sub>O<sub>2</sub>CO<sub>3</sub> VS<sub>2</sub>/Bi<sub>2</sub>O<sub>2</sub>CO<sub>3</sub>

Cl P

VS<sub>2</sub>/Bi<sub>2</sub>O<sub>2</sub>CO<sub>3</sub>

内

[0006] VS<sub>2</sub>/Bi<sub>2</sub>O<sub>2</sub>CO<sub>3</sub>

VS<sub>2</sub>/Bi<sub>2</sub>O<sub>2</sub>CO<sub>3</sub>

[0007] VS<sub>2</sub>/Bi<sub>2</sub>O<sub>2</sub>CO<sub>3</sub>

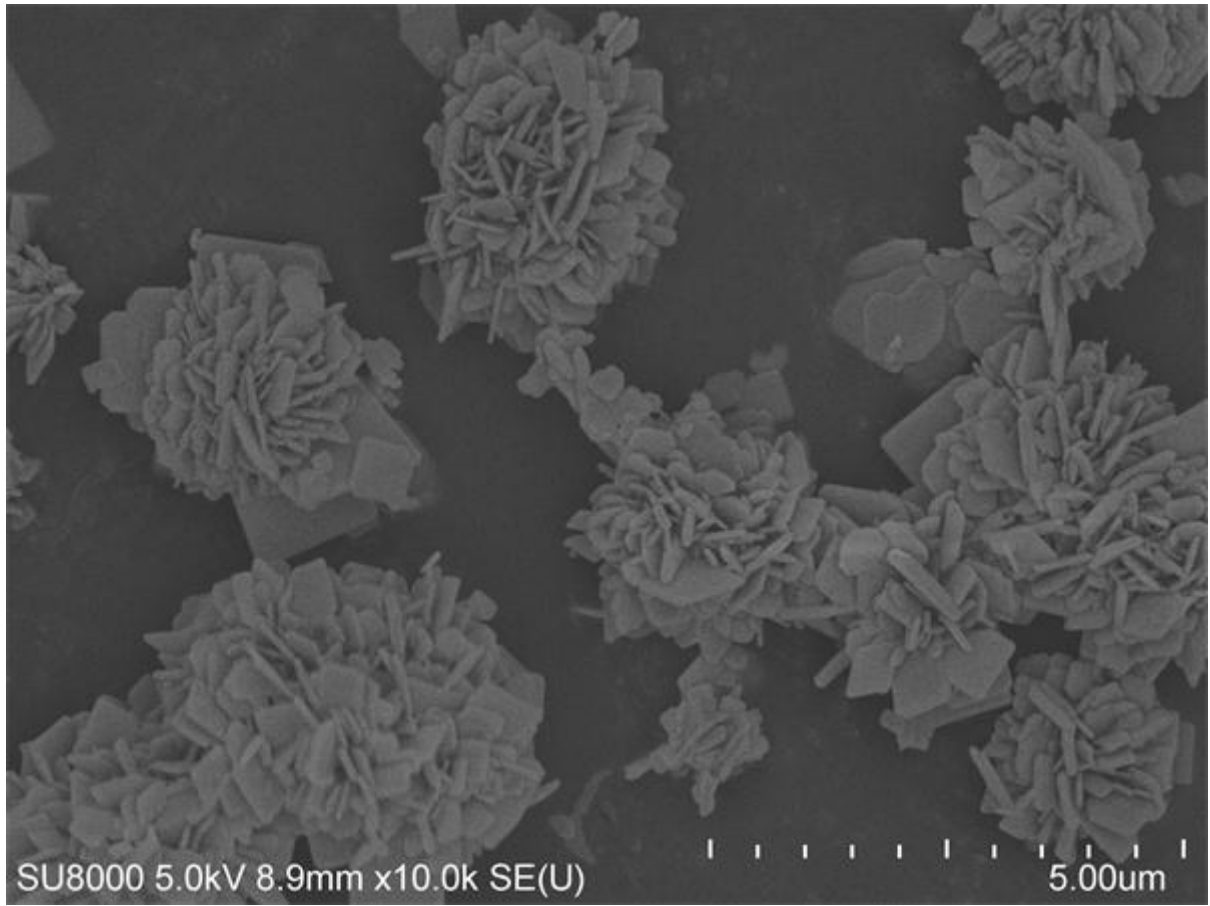
[0008] S1 0.105mmol VS<sub>2</sub> 1mol /L HNO<sub>3</sub>

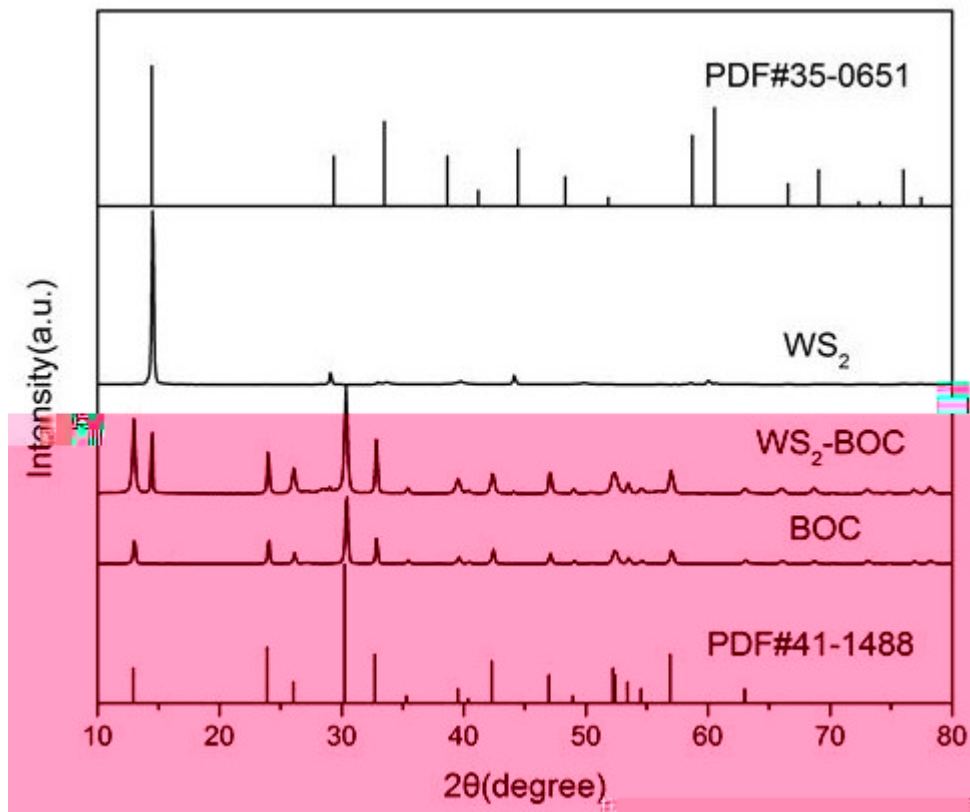
A

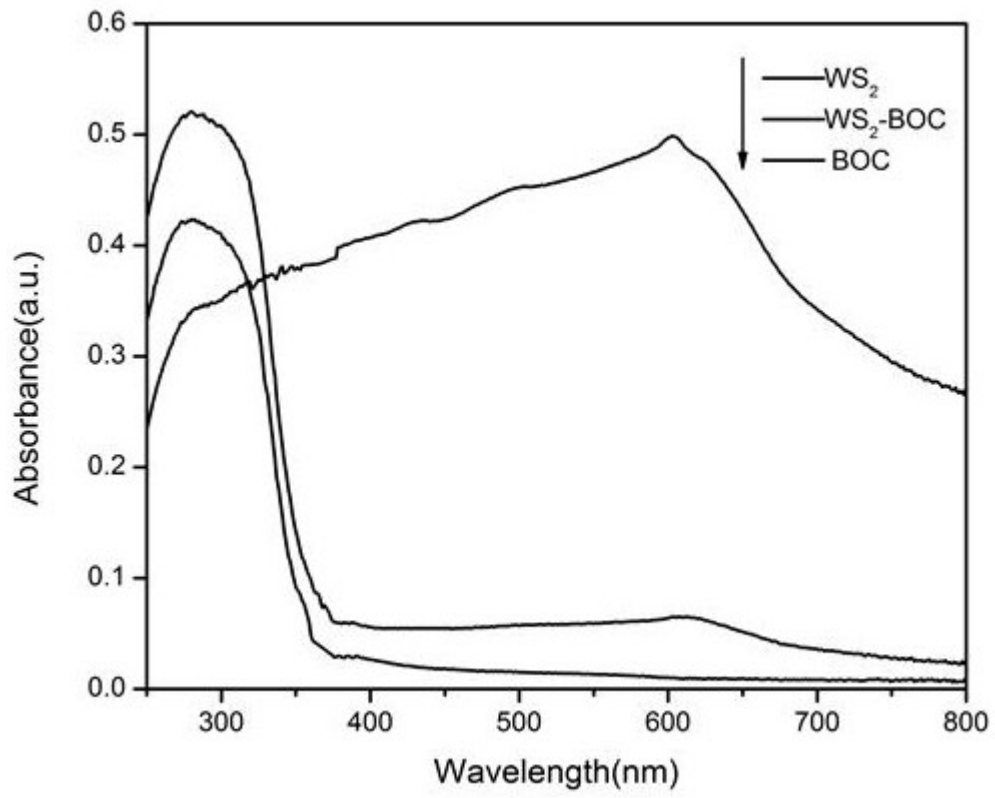
|        |    |  |   |    |   |   |
|--------|----|--|---|----|---|---|
| [0009] | S2 | 4mmol  | Bi (NO <sub>3</sub> ) <sub>3</sub> ·5H <sub>2</sub> O           | A  |   | B   |
| [0010] | S3 |  | B   |    | C   | C pH  |
|        | 9  |  | 180   | 1h |   |   |
|        |    |  |   | 60 | 12h   | VS <sub>2</sub> /Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> |
| [0011] |    |  | VS <sub>2</sub> /Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> |    |   |   |
| [0012] |    |  | VS <sub>2</sub> /Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> |    |   |   |
| [0013] | 1  | 1  | VS <sub>2</sub> /Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> |    | FESEM   |   |
| [0014] | 2  | Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> | VS <sub>2</sub>   | 1  | VS <sub>2</sub> /Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> | XRD   |
| [0015] | 3  | Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> | VS <sub>2</sub>   | 1  | VS <sub>2</sub> /Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> | UV Vis  |
|        |    |  |   |    |   | DRS   |
| [0016] | 4  | Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> |   | 1  | VS <sub>2</sub> /Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> | PL  |
| [0017] | 5  | 1  | VS <sub>2</sub> /Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> |    | HRTEM   |   |
| [0018] | 6  | 1  | VS <sub>2</sub> /Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> |    |   |   |
| [0019] | 7  |  |   |    |   |   |
| 具体     |    |  |   |    |   |   |
| [0020] |    |  |   |    |   |   |
| [0021] |    | 1  |   |    |   |   |
| [0022] | S1 | 0.105mmol                                      | VS <sub>2</sub>   |    | 1mol /L   | HNO <sub>3</sub>  |
|        | A  |  |   |    |   |   |
| [0023] | S2 | 4mmol  | Bi (NO <sub>3</sub> ) <sub>3</sub> ·5H <sub>2</sub> O           | A  |   | B   |
| [0024] | S3 |  | B   |    | C   | C pH  |
|        | 9  |  | 180   | 1h |   |   |
|        |    |  |   | 60 | 12h   | VS <sub>2</sub> /Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> |
|        |    |  | VS <sub>2</sub> BOC   |    |   |   |
| [0025] | 1  | 1  | VS <sub>2</sub> /Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> |    | FESEM   |   |
|        |    | 50 nm  |   |    | 1 μm  |   |
| [0026] | 2  | Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> | VS <sub>2</sub>   | 1  | VS <sub>2</sub> /Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> | XRD   |
|        |    | Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> | VS <sub>2</sub>   |    | Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub>                  | JCPDS NO. 41  |

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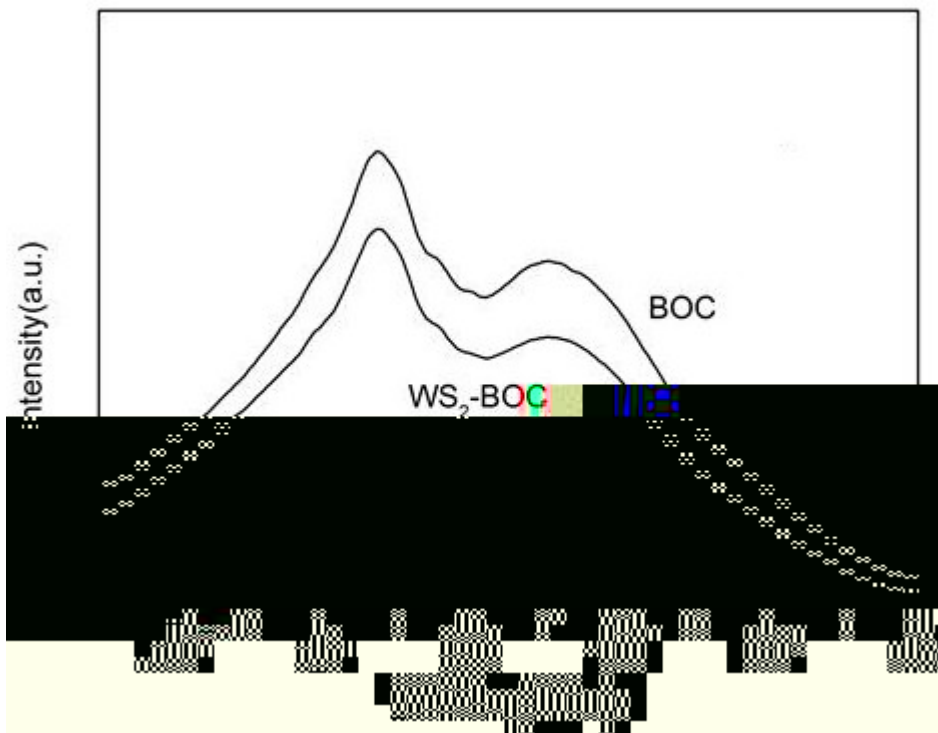
1488  $\text{VS}_2$  JCPDS no. 35 0651  $\text{VS}_2/\text{Bi}_2\text{O}_2\text{CO}_3$   
 $\text{Bi}_2\text{O}_2\text{CO}_3$  14.3° 28.8° 43.9°  $\text{VS}_2$   $\text{Bi}_2\text{O}_2\text{CO}_3$   
 $\text{VS}_2$   
[0027] 3  $\text{Bi}_2\text{O}_2\text{CO}_3$   $\text{VS}_2$  1  $\text{VS}_2/\text{Bi}_2\text{O}_2\text{CO}_3$  UV Vis  
DRS  $\text{Bi}_2\text{O}_2\text{CO}_3$  402nm  $\text{VS}_2/\text{Bi}_2\text{O}_2\text{CO}_3$   
 $\text{VS}_2$   $\text{Bi}_2\text{O}_2\text{CO}_3$   
 $\text{VS}_2/\text{Bi}_2\text{O}_2\text{CO}_3$   
[0028] 4  $\text{Bi}_2\text{O}_2\text{CO}_3$  1  $\text{VS}_2/\text{Bi}_2\text{O}_2\text{CO}_3$  PL  
 $\text{VS}_2/\text{Bi}_2\text{O}_2\text{CO}_3$   $\text{Bi}_2\text{O}_2\text{CO}_3$   
 $\text{VS}_2/\text{Bi}_2\text{O}_2\text{CO}_3$   $\text{Bi}_2\text{O}_2\text{CO}_3$   
[0029] 5 1  $\text{VS}_2/\text{Bi}_2\text{O}_2\text{CO}_3$  HRTEM HRTEM  
0.62nm 0.27nm 002  $\text{VS}_2$   
110  $\text{Bi}_2\text{O}_2\text{CO}_3$   $\text{VS}_2$   $\text{Bi}_2\text{O}_2\text{CO}_3$   
[0030] 2  
[0031] Cl P 500W  
10mg/L Cl P 40mg 1  $\text{VS}_2/$   
 $\text{Bi}_2\text{O}_2\text{CO}_3$  40mL Cl P 3min  
Cl P HXSEI 30min  
3 2 m# 3 2 3 2 2 S P ! L 2 2 M







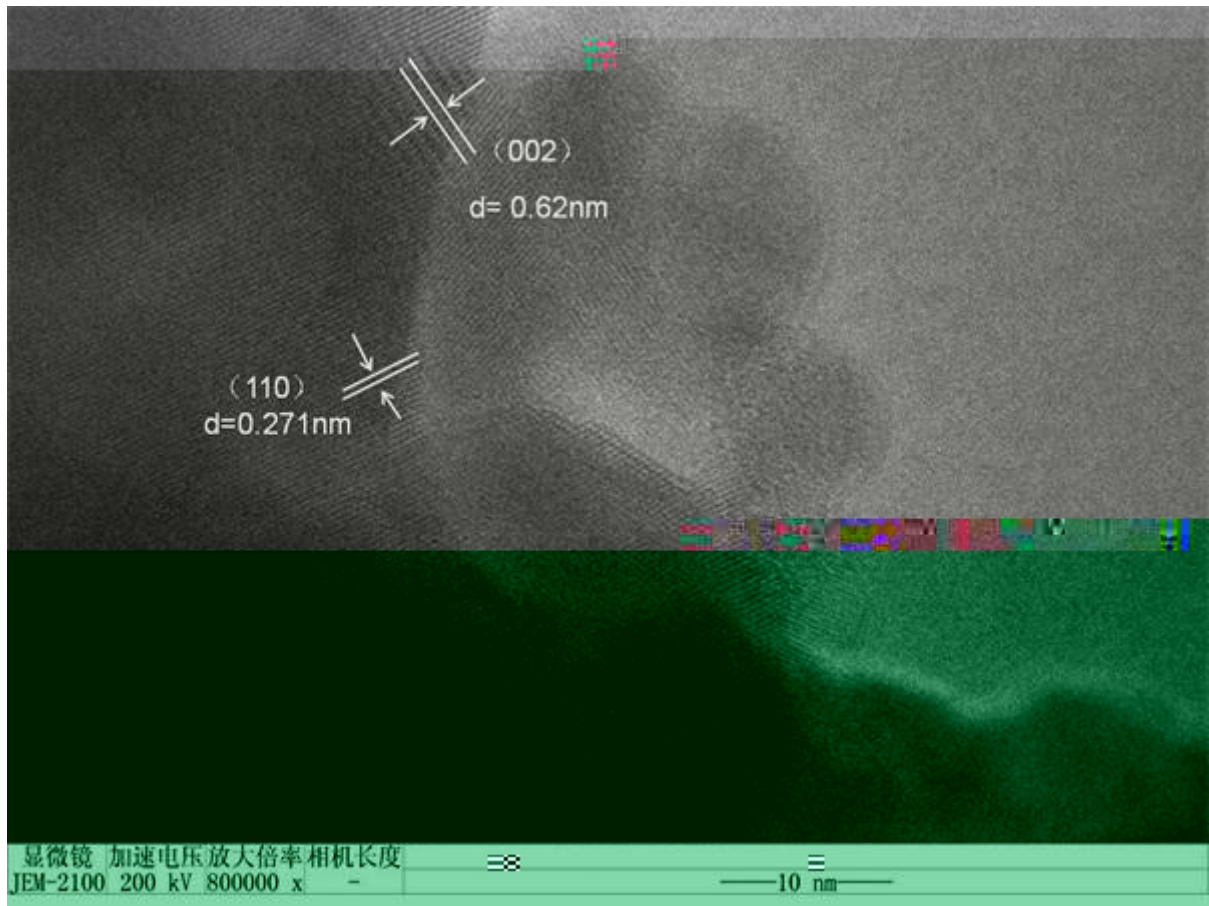
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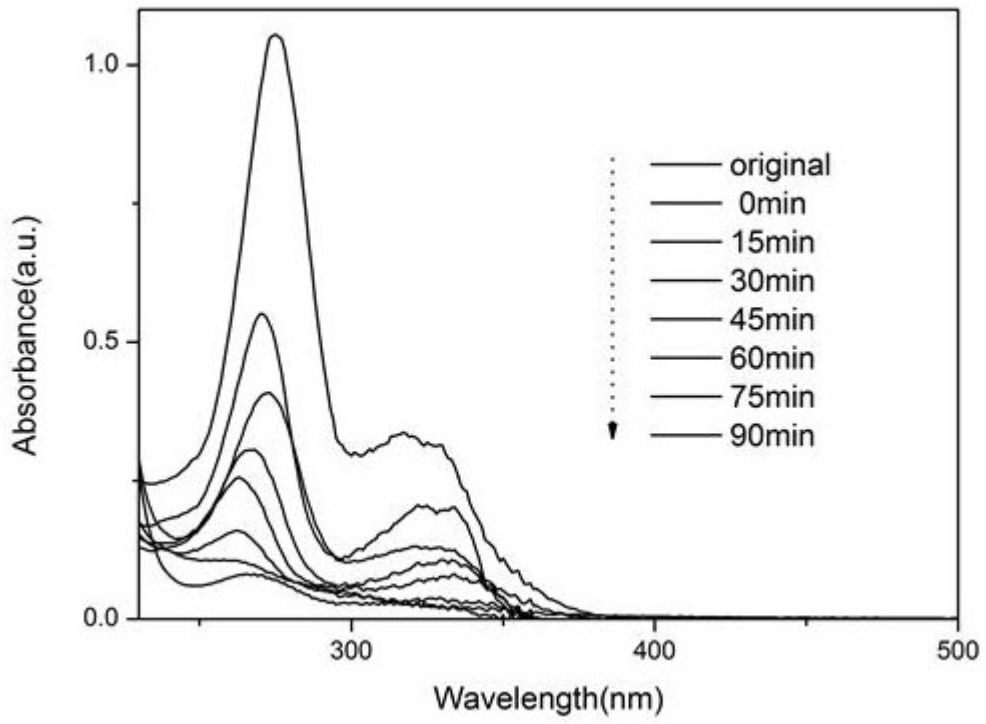


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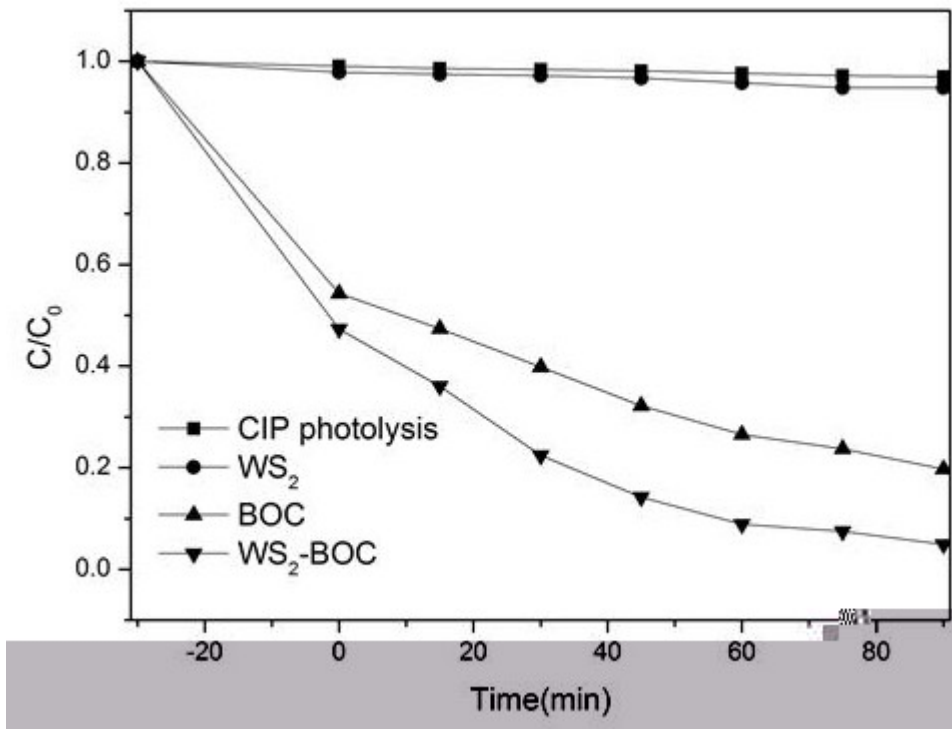
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