

中国科学院大连化学物理研究所

优秀博士后奖励基金申请表

申请人: 叶盛

研究组: 503 组

学科专业: 物理化学

合作导师: 李灿

填表日期: 2018 年 3

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E-Mail			
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	200609-201006	/	
	201009-201306	/	
	201309-	/	
		II	
	800		
	1	BiVO ₄	
	/		
	TOF	2.0 s ⁻¹	4.5%
	BiVO ₄	9	
	BiVO ₄		
	2	Ta ₃ N ₅	
	/		
	ALD	Ta ₃ N ₅	SiO ₂ Ta ₃ N ₅
	3	II	BiVO ₄
	Co	BiVO ₄	Mn ₄ CaO ₅
		II	
	0.17 V		1.23 V vs. RHE
	4.45 mA cm ⁻²		2.0%

1					
1	(21673230)		65	20170101 20201231	
2	(21633010)		291	20170101 20211231	
3	973 (2014CB239400)		501	20140101 20180831	
2					
				/ /	
1	Mimicking the key functions of photosystem II in artificial photosynthesis for photoelectrocatalytic water splitting	Journal of the American Chemical Society	13.858	2018, 140, 3250-3256.	1
2	An artificial photosynthetic system containing an inorganic semiconductor and a molecular catalyst for photocatalytic water oxidation	Journal of Catalysis	6.844	2016, 338, 168-173.	1
3	A review on g-C ₃ N ₄ for photocatalytic water splitting and CO ₂ reduction	Applied Surface Science	3.387	2015, 385, 15-27.	1
4	Facile fabrication of magnetically separable graphitic carbon nitride photocatalysts with enhanced photocatalytic activity under visible light	Journal of Materials Chemistry A	8.867	2013, 179, 191-197.	1
5	Post-combustion CO ₂ capture with the HKUST-1 and MIL-101(Cr) metal-organic frameworks: Adsorption, separation and regeneration	Microporous and Mesoporous Materials	3.615	2013, 1, 3008-3015.	1
6	Enabling an integrated tantalum nitride photoanode to approach the theoretical photocurrent limit for solar	Energy & Environmental Science	29.518	2016, 9, 1327-1334.	2

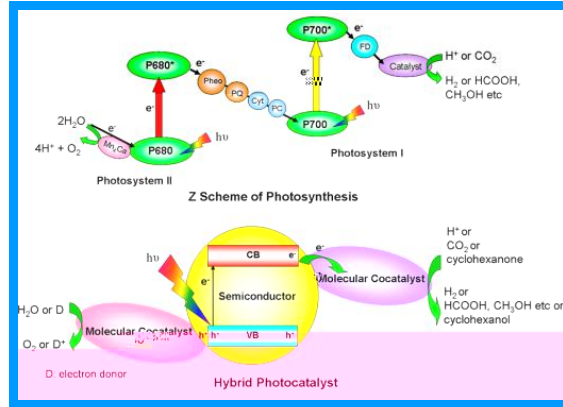
		water splitting				
7	Molecular cobalt-salen complexes as novel cocatalysts for highly efficient photocatalytic hydrogen production over a CdS nanorod photosensitizer under visible light	Journal of Materials Chemistry A	8.867	2015, 3, 15729-15737.	3	
8	Charge-Transfer Dynamics Promoted by Hole Trap States in CdSe Quantum Dots Ni ²⁺ Photocatalytic System	Journal of Physical Chemistry C	4.536	2017, 121, 17112-17120.	3	
9	Inorganic-organic hybrid NiO/g-C ₃ N ₄ photocatalyst for efficient methylene blue degradation using visible light	RSC Advances	3.108	2014, 4, 22491-22496.	4	
10	Pyrolyzed cobalt porphyrin-modified carbon nanomaterial as an active catalyst for electrocatalytic water oxidation	International Journal of Hydrogen Energy	3.582	2015, 40, 6538-6545.	5	
11	Magnetic porous carbons with high adsorption capacity synthesized by a microwave-enhanced high temperature ionothermal method from a Fe-based metal-organic framework	Carbon	6.337	2013, 59, 372-382.	5	
		/	/			
4						
1	-			2016		

2 ACS Publications Symposium

DICP &

[1]

1



1

Ru Ir Mn Co Fe V

[2-7]

[8]
Ce⁴⁺

[9]

TOF

0.3 s⁻¹

Ru
(TOF) 300 s⁻¹
3
[Mn₄CaO₅] Mn

[10]

[11-14]

TOF

300 s⁻¹

Mn

[Mn₄CaO₅]

Mn₄Ca

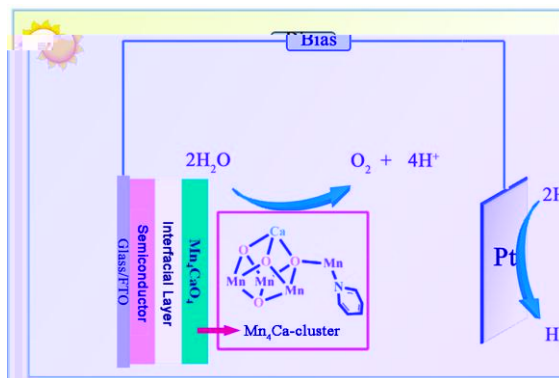
CdS ZnS

[11,13]

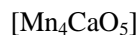
[15]

BiVO₄

[14,16]



2



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