

7、Ultrafast Microwave Synthesis of Carbon-Coated Lithium Vanadium Phosphate Cathode Material for Lithium Ion Batteries

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教育部科技查新工作站 Z12 检索证明

检索证明

经检索《Science Citation Index Expanded》(SCIE)和《Journal Citation Reports》(JCR)数据库,以下1篇文献收录简要信息、期刊影响因子及分区情况如下:

Ultrafast Microwave Synthesis of Carbon-Coated Lithium Vanadium Phosphate Cathode Material for Lithium Ion Batteries

作者: Cui, Xiaoyue; Tang, Zhiyuan; Ma, Xiaokai; 等.

JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY 卷: 21 期: 3 页: 1500-1506 出版年: MAR 2021

被引频次: 0

(来自 Web of Science 的核心合集)

期刊《JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY》2019 年影响因子为 1.134.

2019 年 JCR 分区情况如下:

JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY

impact factor

1.134 0.999

2019 5 年

JCR®类别	类别中的排序	JCR分区
CHEMISTRY, MULTIDISCIPLINARY	137/177	Q4
MATERIALS SCIENCE, MULTIDISCIPLINARY	264/314	Q4
NANOSCIENCE & NANOTECHNOLOGY	94/103	Q4
PHYSICS, APPLIED	124/155	Q4
PHYSICS, CONDENSED MATTER	55/69	Q4

数据来自第2019版 Journal Citation Reports

特此证明
(详细内容见附件)

郑州大学图书馆
教育部科技查新工作站 Z12

检索人: 张丽娟

2021年4月9日



第 1 条, 共 1 条

标题: Ultrafast Microwave Synthesis of Carbon-Coated Lithium Vanadium Phosphate Cathode Material for Lithium Ion Batteries

作者: Cui, XY (Cui, Xiaoyue); Tang, ZY (Tang, Zhiyuan); Ma, XK (Ma, Xiaokai); Yan, J (Yan, Ji)

来源出版物: JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY 卷: 21 期: 3 页: 1500-1506 DOI: 10.1166/jnn.2021.19082 出版年: MAR 2021

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使用次数 (最近 180 天): 25

使用次数 (2013 年至今): 25

引用的参考文献数: 38

摘要: Carbon-coated lithium vanadium phosphate cathode materials were successfully prepared via an ultra-fast microwave irradiation route in 5 min with using activated carbon as the microwave adsorbent. We aimed to utilize this ultra-fast and facile route to shorten the synthesis procedure for obtaining Li₃V₂(PO₄)₃/C cathode material with superior rate capability. To characterize the intrinsic crystal structure and exterior architecture morphology of targeted material, X-ray diffraction pattern (XRD), scanning electron microscopy (SEM) in combined with transmission electron microscopy (TEM) were applied in experiment. The role of microwave irradiation treatment time in affecting the crystalline structure and related lithium-storage electrochemical performance is also investigated in detail. For the optimal Li₃V₂(PO₄)₃/C material, it delivered a specific discharge capacity of 110.1 mAh g⁻¹ at a 0.2 C charging/discharging rate while hold a superior cycling stability over 50 cycles when tested at a 1 C rate. The ultra-fast synthesis route should pave a new way to save the energy in the preparation of phosphate-based electroactive cathode material.

入藏号: WOS:000606560600012

PubMed ID: 33404413

语言: English

文献类型: Article

作者关键词: Microwave Synthesis; Lithium Vanadium Phosphate; Cathode Materials; Lithium Ion Battery

KeyWords Plus: HIGH-RATE CAPABILITY; ELECTROCHEMICAL PERFORMANCE; Li₃V₂(PO₄)₃/C CATHODE; COMPOSITES; SHELL; FRAMEWORKS; NANOTUBES; ELECTRODE; LIFE

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Web of Science 类别: Chemistry, Multidisciplinary; Nanoscience & Nanotechnology; Materials Science, Multidisciplinary; Physics, Applied; Physics, Condensed Matter

研究方向: Chemistry; Science & Technology - Other Topics; Materials Science; Physics

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输出日期: 2021-04-09

关闭



检索证明

经检索《Science Citation Index Expanded》(SCIE)数据库、《Journal Citation Reports》(JCR)数据库和《中国科学院文献情报中心期刊分区表》，以下 1 篇文献的收录简要信息、期刊的影响因子及分区情况如下：

Ultrafast Microwave Synthesis of Carbon-Coated Lithium Vanadium Phosphate Cathode Material for Lithium Ion Batteries

作者: Cui Xiaoyue; Tang Zhiyuan; Ma Xiaokai; 等.

JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY 卷: 21 期: 3 页: 1500-1506 出版年: MAR 2021

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经检索《中国科学院文献情报中心期刊分区表》，2020 年分区情况如下：

期刊全称:	JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY					
期刊简称:	J NANOSCI NANOTECHNO	ISSN:	1533-6880			
年份:	2020年	续录:	否			
	学科名称	分区	Top期刊			
小类	CHEMISTRY, MULTIDISCIPLINARY化学综合	4	-			
小类	MATERIALS SCIENCE, MULTIDISCIPLINARY材料科学: 综合	4	-			
小类	NANOSCIENCE & NANOTECHNOLOGY纳米科技	4	-			
小类	PHYSICS, APPLIED物理: 应用	4	-			
小类	PHYSICS, CONDENSED MATTER物理: 凝聚态物理	4	-			
大类	工程技术	4	否			
期刊影响因子		总被引频次				
2017年	2018年	2019年	2017-2019年平均	2018年	2019年	2018年-2019年
1.354	1.093	1.134	1.194	15201	15156	30357

特此证明

(详细内容见附件)

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教育部科技查新工作站 Z12

检索人: 张永刚

2021年4月9日

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来源出版物页码计数: 7

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