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Abstract	/AB	S SYNTHESIS/AB S ?VALENC?/AB	AB
Accession Number	/AN	S 92:106/AN	AN
Author/Advisor	/AU	S GILPIN, R?/AU	AU
Author Identifier	/AUID	S 0000-0003-4978-6051/AUID	AUID
Classification Code **(1)** (Descriptor) (code and text)	/CC	S ENGINEERING/CC S AEROSPACE ENGINEERING/CC S 0538/CC	CC
Corporate Source/Institution **(1)** (code and text)	/CS	S DUKE/CS S PACIFIC UNIV?/CS S 0173/CS	CS
Entry Date **(2,3)**	/ED	S ED>=921231	ED
Field Availability	/FA	S AB/FA	Not displayed
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International Standard (Document) Number (contains ISBN)	/ISN	S 0-315-61037-9/ISN	ISN, SO
Journal Title	/JT	S AMERICAN DOCTORAL DISSERTATION/JT	JT, SO
Language (code and text)	/LA	S ENGLISH/LA S EN/LA	LA
Publication Date **(2)**	/PD	S 19920000/PD	SO
Publication Year **(2)**	/PY	S 1950/PY	PY
Source (contains journal title, collation, publication date, publisher, no. of pages, order number, and ISBN)	/SO	S (MASTERS (L) VOL 30)/SO S 0-315-61037-9/SO S AAR1347307/SO	ISN, JT, SO
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Format	Content	Examples
AB	Abstract	D L4 1-4 AB
AN	Accession Number	D L1 3 AN
AU	Author/Advisor	D AU CS 1,3-5
AUID	Author Identifier	D AU AUID 1
CC	Classification Code (Descriptor)	D CC 5-10
CS	Corporate Source/Institution	D 1-3,7,8 CS SO
ED	Entry Date	D 6 ED
FS	File Segment	D FS 1-5
ISN	International Standard (Document) Number (ISBN)	D L1 ISN 3
JT	Journal Title	D 1,3,6,8 JT L5
LA	Language	D LA
PY	Publication Year	D L8 PY 1-3
SO	Source	D 1 4 SO
TI	Title	D L1 TI AB
UP	Update Date	D 5 UP
ABS	AB	D AB
ALL	AN, TI, AU, AUID, CS, SO, FS, LA, AB, CC	D 1, 3, 5 ALL
BIB	AN, TI, AU, AUID, CS, SO, FS, LA (default)	D 1-10 BIB
CBIB	Compressed bibliographic information	D CBIB
IALL	ALL, indented with text labels	D IALL
IBIB	BIB, indented with text labels	D 1-3,5 IBIB
IND	CC	D L3 2 IND
SAM	TI, CC	D SAM
SCAN	TI, CC (random display without answer numbers)	D SCAN
HIT	Fields containing hit terms	D 1 5 10 HIT
KWIC	Hit terms with 20 words on either side (KeyWord-In-Context)	D KWIC
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Abstract	AB	Y **(2)**	N
Accession Number	AN	Y	N
Author/Advisor	AU	Y	Y
Author Identifier	AUID	Y	Y
Classification Code (Descriptor)	CC	Y	Y
Corporate Source/Institution	CS	Y	Y
Document Type	DT	Y	Y
Entry Date	ED	Y	Y
File Segment	FS	Y	Y
International Standard Book Number	ISBN	N	Y
International Standard (Document) Number	ISN	Y	Y
Journal Title	JT	Y	Y
Language	LA	Y	Y
Occurrence of Hit Terms	OCC	N	Y
Publication Date	PD	Y	Y
Publication Year	PY	Y **(4)**	Y
Source	SO	Y **(5)**	N
Title	TI	Y (default)	Y
Update Date	UP	Y	Y

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(5) Selects ISBN with /SO appended.

Sample Records

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ACCESSION NUMBER:   2017:88719  DISSABS   Order Number: AAI10268911
TITLE:              Fabrication and Applications of Multifunctional
                    Superhydrophobic Surfaces Based on Surface Chemistry and
                    Morphology
AUTHOR:             Liu, Yang [Ph.D.]; Lyons, Alan M. [advisor]
AUTHOR ID:          ORCID: https://orcid.org/0000-0003-4978-6051
CORPORATE SOURCE:   City University of New York (0046)
SOURCE:             Dissertation Abstracts International, (2017) Vol. 78, No.
                    9B(E). Order No.: AAI10268911. ProQuest Dissertations &
                    Theses. 201 pages.
                    ISBN: 978-1-369-74659-4.
DOCUMENT TYPE:      Dissertation
FILE SEGMENT:       DAI
LANGUAGE:           English
ENTRY DATE:         Entered STN: 20170705
                    Last Updated on STN: 20170705
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DISPLAY ALL

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L3   ANSWER 300 OF 506  DISSABS COPYRIGHT (C) 2017 ProQuest Information and
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AN   2017:79825  DISSABS   Order Number: AAI10249874
TI   Iron uptake in symbiosis: The role of siderophore in the association
     between Vibrio fischeri and Euprymna scolopes
AU   DaSilva, Evan [M.S.]; Whistler, Cheryl A. [advisor]
AUID ORCID: https://orcid.org/0000-0002-4186-0272
CS   University of New Hampshire (0141)
SO   Masters Abstracts International, (2016) Vol. 56, No. 3(E). Order No.:
     AAI10249874. ProQuest Dissertations & Theses. 76 pages.
     ISBN: 978-1-369-51560-2.
DT   Dissertation
FS   MAI
LA   English
ED   Entered STN: 20170523
     Last Updated on STN: 20170523
AB        Iron acquisition is well studied in pathogens, and successful
     virulence is often attributed to iron acquisition by siderophore and heme
     uptake; however, the role of iron uptake in mutual symbiotic interactions
     is not as well understood. The mutual symbiosis between Vibrio fischeri
     and the Hawaiian bobtail squid, Euprymna scolopes, is a well-characterized
     system in which iron uptake has been implicated as a symbiotic factor.
     Four studies have implicated iron uptake in the symbiosis: 1) A TnLux
     reporter assay revealed that siderophore is more highly expressed by V.
     fischeri  in the light organs of juvenile squid compared to  V. fischeri
     in liquid culture; 2) Microarray data showed that genes for siderophore
     production are upregulated in the light organs of adult squid; 3) A
     siderophore deficient glnD mutant of V. fischeri  had a persistence defect
     in the light organ that was complemented by addition of iron to the
     seawater; and 4) A V. fischeri mutant in which the heme uptake locus was
     deleted had a persistence defect in the squid light organ that was
     apparent in competition with the ancestor strain V. fischeri ES114. I
     hypothesize that iron uptake by siderophore is necessary for persistence
     of V. fischeri in the squid light organ, complementary to heme uptake, and
     that due to the toxic nature of iron, sequestration by siderophore
     contributes oxidative stress response.
          To assess the role of iron uptake in the interaction between  V.
     fischeri and the Hawaiian bobtail squid we utilized several strategies: 1)
     I identified itron uptake systems available to V. fischeri by
     bioinformatically comparing known iron uptake systems against the genome;
     2) To reveal potential avenues by which iron uptake is regulated in  V.
     fischeri, we identified genes that influence siderophore biosynthesis by
     screening a transposon mutant library for siderophore phenotypes; 3) I
     assessed the physiological role, in growth and oxidative response, of
     several of the iron uptake genes previously identified; and 4) I directly
```

assessed the symbiotic ability of mutants deficient in iron uptake.

The bioinformatic search revealed several siderophore uptake systems, as well as the previously described heme uptake system; however, only one siderophore biosynthesis system, for aerobactin, was identified. In screening the mutant library, I identified many genes in the flagellar locus and the cellular biosynthesis locus that positively influence siderophore production as well as two quorum sensing genes, AinS and RpoQ, and several cell wall biogenesis/oxidative sensing genes that negatively influence siderophore production. We determined that aerobactin biosynthesis does not contribute to oxidative stress response but does contribute to growth in iron limiting conditions, suggesting a purely nutritional role for siderophore in the symbiosis. When we tested the symbiotic ability of an iucA mutant deficient in siderophore, we could not demonstrate a persistence defect; however, we did find that two siderophore uptake mutants have a competitive defect 24 hours after inoculation, suggesting that siderophore contributes to symbiotic fitness. These findings suggest that regulation of iron uptake in V. fischeri involves more than just response to iron levels, and that iron uptake regulation is intertwined with symbiotically relevant traits. Due to the monospecific nature of the symbiosis, it is unlikely that the non-aerobactin uptake systems contribute to the symbiotic ability of V. fischeri; however, it is clear that aerobactin does contribute to symbiotic ability by conferring a growth advantage over other strains deficient in aerobactin uptake.

CC 0307 Biology, Molecular; 0369 Biology, Genetics; 0410 Biology, Microbiology

DISPLAY SAM

TI SOLAR ENERGY AS A POTENTIAL HEAT SOURCE FOR THE HEAT PUMP
CC 0548 ENGINEERING, MECHANICAL; 0791 ENERGY