Press
niversity
Ë
<u>-</u>
dge
Ä
amk
Ű
ठ
ne
n jin
9
ĕ
핤
₫
Publis
Δ
Δ
Δ
2013.009 Publ
Δ
mr.2013.009 P
mr.2013.009 P
mr.2013.009 P
Δ
mr.2013.009 P

POS ublication Title		The state of the s	2. Publication Number		3. Filling I	Date
		rials Research	7 6 0 9	3 0	10/1/	
sue Frequenc			5. Number of Issues Publis	hed Annually		Subscription Price
ice Month omplete Mailir		ress of Known Office of Publication (Not printer) (Stree	24 et, city, county, state, and Zi	IP+4®)	\$1,561 Contact F	Person
mbridge U	nive	rsity Press Americas, New York, NY 10013-2473		•	Helen	Sunakawa ne (Include area code)
		ress of Headquarters or General Business Office of Pt	ublisher (Mot printer)		845346	
mbridge U	nive	rsity Press	consider (wor planer)			
inburgh B	uild	ing, Cambridge CB2 2RU, England	Pall In	(t-l		
uil Names and lisher (<i>Name</i> d	and co	elete Mailing Addresses of Publisher, Editor, and Mana Implete mailing address)	aging Editor (Do not leave b	івлк)	· · · · · ·	
mbridge U	nive	rsity Press Americas, New York, NY 10013-2473				
		ete mailing address)				
ry L. Mes		State University USA				
		a State University, USA and complete mailing address)				
		oridge University Press, 32 Ave. of	f the Americas, Ne	ew York, N	Y 10013	1-2473
names and ad names and ad	dress dress	blank. If the publication is owned by a corporation, gives of all stockholders owning or holding 1 percent or make the individual owners. If owned by a partnership of	ore of the total amount of st or other unincorporated firm	tock. If not own , give its name	ed by a co.	rporation, give the
Name	OWN	r. If the publication is published by a nonprofit organiz-	Complete Mailing Addres	is		
Materials Research Society			506 Keystone Driv	re		
			Warrendale, PA 15	086-7537		
		Mortgagees, and Other Security Holders Owning or F		Total Amount	of Bonds,	Mortgages, or
Other Securitie Name	35. If r	one, check box	→ X None Complete Mailing Address	55		***************************************
	_					
The purpose, I Has Not Cl Has Chang	unctio nange jed Du	pletion by nonprofit organizations authorized to mail at, and nonprofit status of this organization and the ext During Preceding 12 Months ring Preceding 12 Months (Publisher must submit exp 012 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01	empt status for federal incor planation of change with this	ne tax purpose		policy on www.usps.c
The purpose, I Has Not Cl Has Chang Torm 3526, Au Publication	unctionange ed Du igust i	n, and nonprofit status of this organization and the exe of During Preceding 12 Months ring Preceding 12 Months (<i>Publisher must submit exp</i>	empt status for federal incor planation of change with this	ne tax purpose statement) NOTICE: See o	our privacy	policy on www.usps.c
The purpose, I Has Not Cl Has Chang Has Chang Form 3526, Au Publication purnal of	unctionange led Do ligust i Title Mati	n, and nonprofit status of this organization and the ext During Preceding 12 Months ring Preceding 12 Months (Publisher must submit exp 012 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01	empt status for federal incor planation of change with this	ne tax purpose statement) NOTICE: See o	our privacy le for Circui	iation Data Below
The purpose, I Has Not Cl Has Chang Has Chang Form 3526, Au Publication purnal of	unctionange led Do ligust i Title Mati	n, and nonprofit status of this organization and the ext During Preceding 12 Months ring Preceding 12 Morths (Publisher must submit exp 012 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01	empt status for federal incor planation of change with this	ne tax purpose statement) NOTICE: See of 14. Issue Dat 09/13	our privacy le for Circui	No. Copies of Sing
The purpose, i Has Not Cl Has Chang The Second Sec	unctionange red Du rgust i Title Mate Natur	n, and nonprofit status of this organization and the ext During Preceding 12 Months ring Preceding 12 Morths (Publisher must submit exp 012 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01	empt status for federal incor planation of change with this	ne tax purpose statement) NOTICE: See of 14. Issue Dat 09/13 Average No. Each Issue I	our privacy le for Circui . Coples During 2 Months	No. Copies of Sing
The purpose, i Has Not Cl Has Chang The Second Sec	unctionange red Du rgust i Title Mate Natur	n, and nonprofit status of this organization and the ext During Preceding 12 Months ring Preceding 12 Months (Publisher must submit exp 012 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 erials Research of Circulation Copies (Net press run) Mailed Outside-County Paid Subscriptions Stated on P	empt status for federal incor isanation of change with this 1-000-9931 PRIVACY PRIVACY	statement) NOTICE: See (14. Issue Dat 14. Issue Dat 19/13 Average No. Each Issue Preceding 1.	e for Circui Coples During 2 Months	No. Copies of Sing Issue Published Nearest to Filing D
The purpose, In Has Charge Has Charge Has Charge Form 3526, Au Publication Durnal of Extent and a. Total Num.	unctionange ged building gust? Title Mater Natur	n, and nonprofit status of this organization and the ext During Preceding 12 Months (Publisher must submit exp 012 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 exials Research of Circulation Copies (Net press run) Malled Outside-County Paid Subscriptions Stated on P distribution above nominal rate, solvertiser's proof copies	empt status for federal incor stanation of change with this 1-000-9931 PRIVACY PS Form 3541 (Include paid es, and exchange copies)	ne tax purpose (statement) NOTICE: See of 14. Issue Dat 09/13 Average No. Each Issue I Proceding 1:	e for Circui Coples During 2 Months	No. Copies of Sing Issue Published Nearest to Filing D
The purpose, In Has Change and State	unctionange ged building gust? Title Mater Natur	n, and nonprofit status of this organization and the ext During Preceding 12 Months ring Preceding 12 Months (Publisher must submit exp 012 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 erials Research of Circulation Copies (Net press run) Mailed Outside-County Paid Subscriptions Stated on P	empt status for federal incor- clanation of change with this 1-000-9931 PRIVACY PS Form 3541 (Include paid e, and exchange copies) m 3541 (Include paid dis-	statement) NOTICE: See (14. Issue Dat 14. Issue Dat 19/13 Average No. Each Issue Preceding 1.	e for Circui Coples During 2 Months	No. Copies of Sing Issue Published Nearest to Filing D
The purpose, In Has Chang 1 Has Not Cl Has Chang 1 Has Chang 2 Has Chang 2 Has Chang 3526, Au Publication purnal of Extent and a. Total Num b. Paid Circulation	Title Matur	n, and nonprofit status of this organization and the ext During Preceding 12 Months ring Preceding 12 Months ring Preceding 12 Months (Publisher must submit exp 012 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 extalls Research or Circulation Copies (Net press run) Mailed Outside-County Paid Subscriptions Stated on P distribution above nominal rate, advertiser's proof copi Mailed In-County Paid Subscriptions Stated on PS For	empt status for federal incor stanation of change with this 1-000-9931 PRIVACY PS Form 3541 (Include paid es, and st (Include paid es, and st (Include paid) m 3541 (Include paid) ough Dealers and Cerriers,	e tax purpose statement) NOTICE: See (14. Issue Dat 09/13 Average No. Each Issue I Proceding 1 533	e for Circui Coples During 2 Months	No. Copies of Sing Issue Published Nearest to Filing D 478
The purpose, In Has Chang Has Not Cl Has Chang Form 3526, Au Publication Durnal of Extent and a. Total Num b. Paid Circulation (By Mail and Outside	Title Matur (1) (2) (3)	n, and nonprofit status of this organization and the ext During Preceding 12 Months (Publisher must submit exp 012 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 3)	empt status for federal incor planation of change with this 1-000-9931 PRIVACY PS Form 3541 (Include paid es, and exchange copies) rm 3541 (Include paid dis- ard exchange copies) ough Dealers and Carriers, ution Outside USPS9	ne tax purpose statement) NOTICE: See to 14. Issue Dat 09/13 Average No. Each Issue I Proceding 1 17:	e for Circui Copies During 2 Months	No. Copies of Sing Issue Published Nearest to Filing D 478 142
The purpose, Indiana the purpose of the publication purmal of Extent and a. Total Num. b. Paid Circulation (By Mad and Circulation (By Mad and Circulation (By Mad) and the Mail)	Title Mat- Natur (1) (2) (3)	n, and nonprofit status of this organization and the ext During Preceding 12 Months fring Preceding 12 Months fring Preceding 12 Months (Publisher must submit exp D12 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 PSN: 7530	empt status for federal incor planation of change with this 1-000-9931 PRIVACY PS Form 3541 (Include paid es, and exchange copies) rm 3541 (Include paid dis- ard exchange copies) ough Dealers and Carriers, ution Outside USPS9	14. Issue Dat 09/13 Average No. Each Issue I 17:	e for Circui Copies During 2 Months	No. Copies of Sing Issue Published Nearest to Filing D 478
The purpose, Indiana the purpose of the publication purmal of Extent and a. Total Num. b. Paid Circulation (By Mad and Circulation (By Mad and Circulation (By Mad) and the Mail)	Title Mat- Natur (1) (2) (3)	n, and nonprofit status of this organization and the ext During Preceding 12 Months fring Preceding 12 Months fring Preceding 12 Months fring Preceding 12 Months (Publisher must submit exp D12 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 PSN: 7530-0	empt status for federal incor planation of change with this 1-000-9931 PRIVACY PS Form 3541 (Include paid es, and exchange copies) rm 3541 (Include paid dis- ard exchange copies) ough Dealers and Carriers, ution Outside USPS9	ne tax purpose statement) NOTICE: See to 14. Issue Dat 09/13 Average No. Each Issue I Proceding 1 17:	Coples During 2 Months	No. Copies of Sing Issue Published Nearest to Filing D 478 142
The purpose, It has change and the purpose and	Title Mat- Natur (1) (2) (3)	n, and nonprofit status of this organization and the ext During Preceding 12 Months fring Preceding 12 Months fring Preceding 12 Months (Publisher must submit exp D12 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 PSN: 7530	empt status for federal incor planation of change with this 1-000-9931 PRIVACY PS Form 3541 (Include paid es, and exchange copies) rm 3541 (Include paid dis- and exchange copies)	14. Issue Dat 14. Issue Dat 09/13 Average No. Each Issue 1 7: 0 0 241	Coples During 2 Months	No. Copies of Sing Issue Published Noarest to Filing D 478 142 0 0 0 238
The purpose, I has Not Note of Publication Publication Publication Extent and a. Total Num b. Paid Circulation (By Mas' and Circulation (By Mas' Cir	unctionange ged but gust if Title Matur (1) (2) (3) (4) United by the control of	n, and nonprofit status of this organization and the ext During Preceding 12 Months (Publisher must submit exp 1012 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 3) PSN: 7530-01 (Pa	empt status for federal incorpansation of change with this cooperation of change with this process of the cooperation of the co	ne tax purpose statement) 14. Issue Dat 19/13 Average No. Each Issue I Preceding t 1/19 0 0 0 244	Coples During 2 Months	No. Copies of Sing Issue Published Nearest to Filing D 478 142 0 0 238
The purpose, II has Not Change The State That North That The State The State That The State The Stat	unctionange ged but gust if Title Matur (1) (2) (3) (4) United by the control of	n, and nonprofit status of this organization and the ext During Preceding 12 Months Intog Preceding 12 Months Intog Preceding 12 Months Intog Preceding 12 Months (Publisher must submit exp D12 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 Mailed Outside County Paid Subscriptions Stated on Polistribution above nominal rate, advertiser's proof copie Mailed In-County Paid Subscriptions Stated on PS For Inhation above nominal rate, advertiser's proof copies, Paid Distribution Dutside the Mails inclusting Sales The Tribution above the Maile inclusting Sales The Tribution Above nominal rate, advertiser's proof copies, Paid Distribution by Other Classes of Mail Through in Class Maile? Paid Distribution by Other Classes of Mail Through in Class Maile? Prec or Nominal Rate Outside-County Copies included on Free or Nominal Rate In-County Copies included on Free or Nominal Rate In-County Copies included on Free or Nominal Rate In-County Copies included on Free or Nominal Rate Outside-County Copies included on Free or Nominal Rate Copies Mailed at Other Classes	empt status for federal incorpansation of change with this cooperation of change with this process of the cooperation of the co	ne tax purpose statement) NOTICE: See (14. issue Dat 09/13 Average No. Each Issue 17: 17: 17: 17: 17: 17: 17: 17: 17: 17:	Coples During 2 Months	No. Copies of Sing Issue Published Nearest to Filing D 478 142 0 0 238 380 8
The purpose, I has Not Note of Publication Publication Durinal of Extent and a. Total Num a. Total Num b. Paid Circulation (By Mail and Outside the Mail) d. Free or Nominal Co. Total Paid I Rete of Nominal (By Mail and By Mail an	Unctionary and the second of t	n, and nonprofit status of this organization and the ext During Preceding 12 Months (Publisher must submit exp 1012 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 3) PSN: 7530-01 (Pa	empt status for federal incor lanation of change with this 1-000-9931 PRIVACY PRI	14. Issue Dat 09/13 Average No. Each Issue 1 7: 00 00 00 24: 8 00 00	Coples During 2 Months	No. Copies of Sing Issue Published Nearest to Filing D 478 142 0 0 238 380 8
the purpose, I has Not	Uncticle Unange ped Di Unange ped Di Unange ped Di Unange Mat- Natur (1) (2) (3) (4) (4) (3) (4) (4)	n, and nonprofit status of this organization and the ext During Preceding 12 Months (Publisher must submit exp 012 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 3)	empt status for federal incorpanation of change with this content of the property of the prope	14. Issue Dat 09/13 Average No. Each Issue Dat 09/13 Average No. Each Issue Dat 09/13 42: 8	Coples During 2 Months	No. Copies of Sing Issue Published Noarest to Filing D 478 142 0 0 238 380 8
the purpose, I has Not	Uncticle Unange ped Di Unange ped Di Unange ped Di Unange Mat- Natur (1) (2) (3) (4) (4) (3) (4) (4)	n, and nonprofit status of this organization and the ext During Preceding 12 Months (Publisher must submit exp 1012 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 3) PSN: 7530-01 (Pa	empt status for federal incorpanation of change with this content of the property of the prope	14. Issue Dat 09/13 Average No. Each Issue 1 7: 00 00 01 24: 8 00 00	cour privacy Copies During A Months 5	No. Copies of Sing Issue Published Nearest to Filing D 478 142 0 0 238 380 8
The purpose, I has Not Change I has Not Change I has Change I have I h	Uncettic Materials (1) (1) (2) (3) (4) (4) (4) (4)	n, and nonprofit status of this organization and the ext During Preceding 12 Months (Publisher must submit exp 012 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 3)	empt status for federal incorpanation of change with this content of the property of the prope	### 14 seven 15 seve	our privacy Copiles Copiles S S S S S S S S S S S S S	No. Copies of Sing Issue Published Noarest to Filing D 478 142 0 0 238 380 8 0 11
the purpose, I has not of the purpose of the publication our nal of Extent and a. Total Num b. Paid Circulation (By Mail and Outside the Mail) c. Total Paid I d. Free or Nominal Rate Distribution of the Mail and and sold the Mail of the Mail of the Mail or total Free or Total Free or Total Free or Total Free or Nominal Rate Distribution of the Mail or total Free or Total Fre	Uncetic United States of the Control	n, and nonprofit status of this organization and the ext During Preceding 12 Months (Publisher must submit exp D12 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 3) PSN: 7530-01	empt status for federal incor planation of change with this 1-000-9931 PRIVACY PR	14. Issue Dat 09/13 Average No. Each Issue I 17: 00 00 01 24: 8 00 01 11	our privacy Copiles Copiles S S S S S S S S S S S S S	No. Copies of Sing Issue Published 1478
the purpose, I has not of the purpose of the publication our nal of Extent and a. Total Num b. Paid Circulation (By Mail and Outside the Mail) c. Total Paid I d. Free or Nominal Rate Distribution of the Mail and and sold the Mail of the Mail of the Mail or total Free or Total Free or Total Free or Total Free or Nominal Rate Distribution of the Mail or total Free or Total Fre	rittle Title Matur (1) (2) (3) (4) (1) (2) (3) (4) (4) (5) (6) (7) (7) (8) (9) (9) (9) (9) (9) (9) (9) (9) (9) (9	n, and nonprofit status of this organization and the ext During Preceding 12 Months (Publisher must submit exp D12 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 2 of 3) PSN: 7530-01 (Page 3) (P	empt status for federal incor planation of change with this 1-000-9931 PRIVACY PR	### we have purpose and a statement of the purpose and a state	our privacy Copies During S 1	No. Copies of Sing Issue Published No. Copies of Sing Issue Published 478
the purpose, I has Not Albert Publication Durinal of Extent and a. Total Num a. Total Num b. Paid Circulation (By Mail and Outside the Mail) c. Total Paid I d. Free or Nominal Rate Distribution (Claudide the Mail) d. Free or Nominal Rate Distribution (By Mail and Coulside the Mail) Total Free or Nominal Rate Distribution (By Mail and Coulside the Mail) Total Free or Nominal Rate Distribution (By Mail and By Mail and	unetic manage and but manage and but manage and but matur. (1) (2) (3) (4) (3) (4) (5) (6) (7) (7) (8) (9) (9) (9) (1) (1) (1) (2) (2) (3) (4) (4) (5) (6) (7) (7) (8) (8) (9) (9) (9) (9) (9) (9) (9) (9) (9) (9	n, and nonprofit status of this organization and the ext During Preceding 12 Months (Publisher must submit exp D12 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 (Page 2 of 3) PSN: 7530-01 (Page 3) (P	empt status for federal incor planation of change with this 1-000-9931 PRIVACY PR	14. Issue Dat 09/13 Average No. Each Issue I 17: 0 0 0 24: 8 0 0 11 19 440	cour privacy Copies During A Months 5 1	No. Copies of Sing Issue Published 1478 478 142 0 0 238 380 8 0 11 19 399
the purpose, I has not propose, I has Not Albert Publication our nal of Extent and a. Total Num b. Paid Circulation (By Mail and Outside the Mail) c. Total Paid I have been continued in the Mail out side the	Uncettic United States of Distribution Distribution Distribution Distribution of 1	n, and nonprofit status of this organization and the ext During Preceding 12 Months (Publisher must submit exp 012 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 2 of 3) Mailed Outside-County Paid Subscriptions Stated on PS For Instruction above nominal rate, advertiser's proof copie (Instruction above nominal rate, advertiser's proof copies, Paid Distribution above nominal rate, advertiser's proof copies, Paid Distribution above nominal rate, advertiser's proof copies, Paid Distribution Subscriptions (Outside the Mails Including Sales Throred Vendors, Counter Sales, and Other Paid Distribution Paid Distribution by Other Classes of Mail Through the Class Mail®). Price or Nominal Rate Outside-County Copies Included on Feree or Nominal Rate Cutside-County Copies Included on Feree or Nominal Rate Cutside-County Copies Included on Feree or Nominal Rate Distribution Outside the Mail (Cominal Rate Distribution (Sum of 16d (1), (2), (3) and (1) (2), (4) (2), (4) (2), (4) (2), (4) (4) (2), (4) (4) (4) (4) (4) (4) (4) (4) (4) (4)	empt status for federal incor lanation of change with this -000-9931 PRIVACY PS Form 3541 (Include paid es, and exchange copies) m 3541 (Include paid dis- and exchange copies) tough Dealers and Carriers, utilion Outside USPS9 to USPS (e.g., First- d on PS Form 3541 PS Form 3541 s Through the USPS Carriers or other means)	### with the state of the state	cour privacy Copies During A Months 5 1	No. Copies of Sing Issue Published No. Copies of Sing Issue Published 478
the purpose, I has Not Old State of the North State	Unctice United to the property of the property	n, and nonprofit status of this organization and the ext During Preceding 12 Months (Publisher must submit exp 1012 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3) (PSN: 7530-01 (Page 2 of 3)). PSN: 7530-01 (Page 2 of 3) Mailed Outside-County Paid Subscriptions Stated on PS For Instruction above nominal rate, advertiser's proof copies. Mailed In-County Paid Subscriptions Stated on PS For Instruction above nominal rate, advertiser's proof copies. Paid Distribution Outside the Mails including Sales The Street Vendors, Counter Sales, and Other Paid Distribution Street Vendors, Counter Sales, and Other Paid Distribution Street Vendors, Counter Classes of Mail Through the Class Mailed (Sales Mailed) on Page 2 (Page 2 of 3). Price or Nominal Rate Outside-County Copies Included on Firee or Nominal Rate Copies Mailed at Other Classe (e.g., First-Class Mail) Free or Nominal Rate Distribution Outside the Mail (Cominal Rate Distribution Stum of 16d (1), (2), (3) and (1) (Sum of 15c and 15e). Publishers #4 (page #3)) ibuted (See Instructions to Publishers #4 (page #3)) if and (2)	empt status for federal incor lanation of change with this -000-9931 PRIVACY PS Form 3541 (Include paid es, and exchange copies) m 3541 (Include paid dis- and exchange copies) tough Dealers and Carriers, utilion Outside USPS9 to USPS (e.g., First- d on PS Form 3541 PS Form 3541 s Through the USPS Carriers or other means)	### with the state of the state	cour privacy Copies During A Months 5 1	No. Copies of Sing Issue Published No. Copies of Sing Issue Published 478
Total Dist Total Circuits on the Mail Total Circuits on	unetic property of the propert	n, and nonprofit status of this organization and the ext During Preceding 12 Months fring Preceding 12 Months fring Preceding 12 Months fring Preceding 12 Months (Publisher must submit exp 012 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 price of the Page 3) PSN: 7530-01 price of Circulation Copies (Net press run) Mailed Outside-County Paid Subscriptions Stated on PS for firbution above nominal rate, advertiser's proof copie Mailed In-County Paid Subscriptions Stated on PS for firbution above nominal rate, advertiser's proof copies, Paid Distribution obtaide the Mails Including Sales Thr freed Vendors, Counter Sales, and Other Paid Distribution Paid Distribution by Other Classes of Mail Through In Class Mail®) Pilon (Sum of 16b (1), (2), (3), and (4)) Free or Nominal Rate Outside-County Copies Included on F Free or Nominal Rate Copies Mailed at Other Classe (e.g., First-Class Mail) Free or Nominal Rate Distribution Outside the Mail (C ominal Rate Distribution (Sum of 16d (1), (2), (3) and (4)) Free or Nominal Rate Distribution Outside the Mail (C ominal Rate Distribution (Sum of 16d (1), (2), (3) and (4)) If I (sum of 15c and 15e) Ibuted (See Instructions to Publishers #4 (page #3)) If I (sum of 15c and 15e)	empt status for federal incor stansition of change with this 1-000-9931 PRIVACY PS Form 3541 (Include paid se, and exchange copies) m 3541 (Include paid dis- and exchange copies) tough Dealers and Carriers, ution Outside USPS at Through the USPS 2arriers or other means) [(41)]	### with the state of the state	our privacy Copies C	No. Copies of Sing Issue Published No. Copies of Sing Issue Published 478
Total Distribution of the publication of the Maily b. Paid Circulation (By Mail and Outside the Mail) c. Total Paid (Sun) d. Free or Nominal Rate Distribution of the Maily c. Total Free of Nominal Rate Distribution of the Maily c. Total Free or Nominal Rate Distribution of the Maily d. Free of Nominal Rate Distribution of the Maily c. Total Paid (Sun) f. Total Distribution of the Maily Total Circulation of the Maily Total Circulation of the Publication of	unetic unantic	n, and nonprofit status of this organization and the ext During Preceding 12 Months ring Preceding 12 Months ring Preceding 12 Months ring Preceding 12 Months (Publisher must submit exp 012 (Page 1 of 3 (Instructions Page 3)) PSN: 7530-01 exitals Research of Circulation Mailed Outside-County Paid Subscriptions Stated on P distribution above nominal rate, advertiser's proof copic Mailed Outside-County Paid Subscriptions Stated on PS For Iribution above nominal rate, advertiser's proof copic Mailed In-County Paid Subscriptions Stated on PS For Iribution above nominal rate, advertiser's proof copic Mailed In-County Paid Subscriptions Stated on PS For Iribution above nominal rate, advertiser's proof copies Paid Distribution Outside the Mails Inclusing Sales The Street Vendors, Counter Sales, and Other Paid Distribution Class Mail®) Paid Distribution by Other Classes of Mail Through In Class Mail®) Free or Nominal Rate Outside-County Copies Included on F Free or Nominal Rate Copies Mailed at Other Classe (e.g., First-Class Mail) Free or Nominal Rate Distribution Outside the Mail (C ominal Rate Distribution (Sum of 16d (1), (2), (3) and (1) In (Sum of 15c and 15e) ibuted (See Instructions to Publishers #4 (page #3)) If and g) 15f times 100) In Includes electronic copies, Report circulation on P: Includes electronic copies of this publication.	empt status for federal incor stansition of change with this 1-000-9931 PRIVACY PS Form 3541 (Include paid se, and exchange copies) m 3541 (Include paid dis- and exchange copies) tough Dealers and Carriers, ution Outside USPS at Through the USPS 2arriers or other means) [(41)]	### with the state of the state	our privacy Copies C	No. Copies of Sing Issue Published No. Copies of Sing Issue Published 478
Total Distribution of the publication of the Maily b. Paid Circulation (By Mail and Outside the Mail) c. Total Paid (Sun) d. Free or Nominal Rate Distribution of the Maily c. Total Free of Nominal Rate Distribution of the Maily c. Total Free or Nominal Rate Distribution of the Maily d. Free of Nominal Rate Distribution of the Maily c. Total Paid (Sun) f. Total Distribution of the Maily Total Circulation of the Maily Total Circulation of the Publication of	unetic unantic	n, and nonprofit status of this organization and the ext During Preceding 12 Months (Publisher must submit exp 012 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 1 of 3 (Instructions Page 3)). PSN: 7530-01 (Page 2 of 3) Mailed Outside-County Paid Subscriptions Stated on PS For Instruction above nominal rate, advertiser's proof copies. Mailed Including Sales The Street Vendors, Counter Sales, and Other Paid Distribution above nominal rate, advertiser's proof copies. Paid Distribution above nominal rate, advertiser's proof copies. Paid Distribution of Distribution Paid Distribution of Distribution Paid Distribution of Sales and Other Classes (e.g., First-Class Mail) Free or Nominal Rate Outside-County Copies Included on Free or Nominal Rate Distribution Outside the Mail (Cominal Rate Distribution Outside the Mail (Cominal Rate Distribution (Sum of 15d (1), (2), (3) and (1) (1) (2), (3) and (1) (1) (2), (3) and (1) (2), (3) and (1) (2), (3) and (1) (3) (3) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	empt status for federal incor stansition of change with this 1-000-9931 PRIVACY PS Form 3541 (Include paid se, and exchange copies) m 3541 (Include paid dis- and exchange copies) tough Dealers and Carriers, ution Outside USPS at Through the USPS 2arriers or other means) [(41)]	### with the state of the state	our privacy Copies C	No. Copies of Sing Issue Published Noarest to Filing D 478 142 0 0 0 238 380 8 0 0 11 19 399 79 478 95\$

Form or who omits material or information req sanctions (including clvit penalties).

PS Form 3526, August 2012 (Page 2 of 3)

https://doi.org/10.1557/jmr.2013.009 Published online by Cambridge University Press

2014 MRS

SPRING MEETING & EXHIBIT

April 21-25, San Francisco, CA

Preregistration Opens Late January 2014!



ENERGY

- A Film-Silicon Science and Technology
- B Organic and Inorganic Materials for Dye-Sensitized Solar Cells
- C Synthesis and Processing of Organic and Polymeric Materials for Semiconductor Applications
- D Materials for Photoelectrochemical and Photocatalytic Solar-Energy Harvesting and Storage
- E Earth-Abundant Inorganic Solar-Energy Conversion
- F Controlling the Interaction between Light and Semiconductor Nanostructures for Energy Applications
- G Photoactivated Chemical and Biochemical Processes on Semiconductor Surfaces
- H Defect Engineering in Thin-Film Photovoltaic Materials
- I Materials for Carbon Capture
- J Physics of Oxide Thin Films and Heterostructures
- K Nanostructures, Thin Films and Bulk Oxides— Synthesis, Characterization and Applications
- L Materials and Interfaces in Solid Oxide Fuel Cells
- M Fuel Cells, Electrolyzers and Other Electrochemical Energy Systems
- N Research Frontiers on Electrochemical Energy Storage Materials— Design, Synthesis, Characterization and Modeling
- Novel Energy-Storage Technologies beyond Li-ion Batteries— From Materials Design to System Integration
- P Mechanics of Energy Storage and Conversion— Batteries. Thermoelectrics and Fuel Cells
- Q Materials, Technologies and Sensor Concepts for Advanced Battery Management Systems
- R Materials Challenges and Integration Strategies for Flexible Energy Devices and Systems
- S Actinides—Basic Science, Applications and Technology
- T Superconductor Materials— From Basic Science to Novel Technology

SOFT AND BIOMATERIALS

- U Soft Nanomaterials
- V Micro- and Nanofluidic Systems for Materials Synthesis,
 Device Assembly and Bioanalysis
- W Functional Biomaterials for Regenerative Engineering
- Biomaterials for Biomolecule Delivery and Understanding Cell-Niche Interactions
- Z Bioelectronics—Materials, Processes and Applications
- AA Advanced Multifunctional Biomaterials for Neuroprosthetic Interfaces

ELECTRONICS AND PHOTONICS

- BB Materials for End-of-Roadmap Devices in Logic, Power and Memory
- CC New Materials and Processes for Interconnects, Novel Memory and Advanced Display Technologies
- DD Silicon Carbide—Materials, Processing and Devices
- EE Advances in Inorganic Semiconductor Nanoparticles and Their Applications
- FF The Grand Challenges in Organic Electronics
- GG Few-Dopant Semiconductor Optoelectronics
- HH Phase-Change Materials for Memory, Reconfigurable Electronics and Cognitive Applications
- II Emerging Nanophotonic Materials and Devices
- JJ Materials and Processes for Nonlinear Optics
- KK Resonant Optics—Fundamentals and Applications
- LL Transparent Electrodes

NANOMATERIALS

- MM Nanotubes and Related Nanostructures
- NN 2D Materials and Devices beyond Graphene
- 00 De Novo Graphene
- PP Nanodiamonds—Fundamentals and Applications
- QQ Computationally Enabled Discoveries in Synthesis, Structure and Properties of Nanoscale Materials
- RR Solution Synthesis of Inorganic Functional Materials
- SS Nanocrystal Growth via Oriented Attachment and Mesocrystal Formation
- TT Mesoscale Self-Assembly of Nanoparticles— Manufacturing, Functionalization, Assembly and Integration
- UU Semiconductor Nanowires—Synthesis, Properties and Applications
- VV Magnetic Nanomaterials and Nanostructures

GENERAL—THEORY AND CHARACTERIZATION

- WW Materials by Design—Merging Advanced *In-situ* Characterization with Predictive Simulation
- XX Shape Programmable Materials
- YY Meeting the Challenges of Understanding and Visualizing Mesoscale Phenomena
- ZZ Advanced Characterization Techniques for Ion-Beam-Induced Effects in Materials
- AAA Applications of *In-situ* Synchrotron Radiation Techniques in Nanomaterials Research
- BBB Advances in Scanning Probe Microscopy for Material Properties
- CCC In-situ Characterization of Material Synthesis and Properties at the Nanoscale with TEM
- DDD Atomic-Resolution Analytical Electron Microscopy of Disruptive and Energy-Related Materials
- EEE Materials Behavior under Extreme Irradiation, Stress or Temperature

SPECIAL SYMPOSIUM

FFF Educating and Mentoring Young Materials Scientists for Career Development

www.mrs.org/spring2014

Meeting Chairs

Jose A. Garrido, Technische Universität München Sergei V. Kalinin, Oak Ridge National Laboratory Edson R. Leite, Federal University of Sao Carlos David Parrillo, The Dow Chemical Company Molly Stevens, Imperial College London

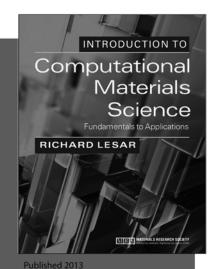
Don't Miss These Future MRS Meetings!

2014 MRS Fall Meeting & Exhibit November 30-December 5, 2014

Hynes Convention Center & Sheraton Boston Hotel Boston, Massachusetts

2015 MRS Spring Meeting & Exhibit April 6-10, 2015

Moscone West & San Francisco Marriott Marquis San Francisco, California



COURSE ADOPTIONS

Visit www.cambridge.org/lesar to request an exam copy today!

MRS MEMBERS

always receive 20% off Cambridge science/engineering books and proceedings!

Enter Discount Code MRSMEMBER at checkout to apply the MRS Member discount.

Not an MRS Member? Join today at www.mrs.org

ORDER TODAY

www.cambridge.org/lesar

customer_service@cambridge.org

800.872.7423

845.353.4141

Introduction to Computational Materials Science **Fundamentals to Applications**

Now Available. Purchase Your Copy Today!

Author

Richard LeSar, Iowa State University

About the Book

Emphasising essential methods and universal principles, this textbook provides everything students need to understand the basics of simulating materials behavior. All the key topics are covered from electronic structure methods to microstructural evolution, appendices provide crucial background material, and a wealth of practical resources are available online to complete the teaching package. Modeling is examined at a broad range of scales, from the atomic to the mesoscale, providing students with a solid foundation for future study and research. Detailed, accessible explanations of the fundamental equations underpinning materials modelling are presented, including a full chapter summarising essential mathematical background. Extensive appendices, including essential background on classical and quantum mechanics, electrostatics, statistical thermodynamics and linear elasticity, provide the background necessary to fully engage with the fundamentals of computational modelling. Exercises, worked examples, computer codes and discussions of practical implementations methods are all provided online giving students the hands-on experience they need.

Key Features

- Examines modelling materials across a broad range of scales, from the atomic to the mesoscale, providing students with a solid foundation for future study and research
- Presents detailed, accessible explanations of the fundamental equations underpinning materials modelling and includes a full chapter summarising essential mathematical background.
- Extensive appendices, including essential background on classical and quantum mechanics, electrostatics, statistical thermodynamics and linear elasticity, provide students with all the background necessary to fully engage with the fundamentals of computational modelling

Hardback | ISBN: 9780521845878 428 pages 339 b/w illus. 15 tables List Price: USD 95.00 MRS Member Discount Price: USD 76.00

Electronic | ISBN: 9781139033398

Visit ebooks.cambridge.org for more information.



https://doi.org/10.1557/jmr.2013.009 Published online by Cambridge University Press

MATERIALS RESEARCH SOCIETY®

2014 Board of Directors

Officers

Tia Benson Tolle, *President*Orlando Auciello, *Immediate Past President*Oliver Kraft, *Vice President*Sean J. Hearne, *Secretary*Michael R. Fitzsimmons, *Treasurer*Todd M. Osman, *Executive Director*

Directors

Shenda M. Baker Alexandra Boltasseva C. Jeffrey Brinker David Cahen Stephen J. Eglash Chang-Beom Eom Susan Ermer Eric Garfunkel Sossina M. Haile Andrea M. Hodge Hideo Hosono Fiona C. Meldrum Kornelius Nielsch Eric A. Stach Stephen K. Streiffer Loucas Tsakalakos

2014 Publications Committee

S. Trolier-McKinstry, *Acting Chair*P.B. Messersmith, *Editors Subcommittee*R.A. Vaia, *New Publication Products Subcommittee*J.M. Phillips, *Publications Quality Subcommittee*

2014 MRS Committee Chairs

M.S. Whittingham, *Academic Affairs* C.B. Carter, *Awards* N. Bassim, *Government Affairs* D.S. Ginley, *Meetings Committee*

Y. Chabal, *Member Engagement* S. Trolier-McKinstry, *Publications* A. Risbud. *Public Outreach*

MRS Headquarters

T.M. Osman, Executive Director
J.A. Dillen, Director of Finance and Administration
P.A. Hastings, Director of Meeting Activities
E.K. Novak, Director of Communications

Journal of Materials Research Founding Sponsors

Allied-Signal Inc. Xerox Corporation

About the Materials Research Society

The Materials Research Society (MRS®) is a not-for-profit scientific association founded in 1973 to promote interdisciplinary goal-oriented basic research on materials of technological importance. Membership in the Society includes over 16,000 scientists from industrial, government, and university research laboratories in the United States and abroad.

The Society's interdisciplinary approach to the exchange of technical information is qualitatively different from that provided by single-discipline professional societies because it promotes technical exchange across the various fields of science affecting materials development. MRS sponsors three major international annual meetings encompassing many topical symposia, as well as numerous single-topic scientific meetings each year. It recognizes professional and technical excellence, conducts tutorials, and fosters technical exchange in various local geographical regions through Section activities and Student Chapters on university campuses.

MRS publishes symposia proceedings, the MRS Bulletin, and other volumes on current scientific developments. The Journal of Materials Research, the archival journal spanning fundamental developments in materials science, is published twenty-four times a year by Cambridge University Press for the MRS. MRS Communications is a full-color letters and prospectives journal focused on groundbreaking work across the spectrum of materials research.

MRS regular and student members may subscribe to *Journal of Materials Research*. See inside front cover for subscription rates for *Journal of Materials Research*.

MRS is an Affiliated Society of the American Institute of Physics and participates in the international arena of materials research through associations with professional organizations.

For further information on the Society's activities, contact MRS Headquarters, 506 Keystone Drive, Warrendale, PA 15086-7573; telephone (724) 779-3003; fax (724) 779-8313.



A publication of the

MRS MATERIALS RESEARCH SOCIETY

Advancing materials, Improving the quality of life.

Periodical Rate Postage Paid at New York, NY and Additional Mailing Offices

ISSN: 0884-2914

Postmaster—Send change of address notice to:

Cambridge University Press 100 Brook Hill Drive West Nyack, NY 10994-2113, USA