

# 4 , Meet the Faculty and Post-Doctoral Fellow Presenters Session

Sunday, October 27, 2024 1:00 PM - 3:00 PM

Exhibit Hall H, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
1	Shuting Xiang	Shuting	Xiang	a
!	Sustainable " #mple\$ Fluio%\$	&elsi M'	Rehmann	b
(	De)#%ing an% E\$pan%ing " ellular Fun)ti#ns *#r Li+ing Te)hn#l#gies	Anush	" hiappin#,Pepe	)
	Engineering Multi,Fate- Tra) .able " ells *#r Smart Pre)isi#n Me%i)ine	Arash	Farha%i	%
/	Bi#inter*a)ing Materials an% Te)hn#l#gies	S#h0ung	Lee	*
1	Dis)#+er0 #* P#l0eth0lene,A)ti+e En20mes *#r#m the 3ut #* the 4ell#5 Meal5#rm an% Be0#n%	R#ss	&lauer	g
6	Neural Engineering *#r Rest#ring 7isi#n8 Stem " ell Therapies an% Mi)r#ph0si#l#gj)al S0stems	9#nathan	S#u)0	i
:	;ierar)hi)al M#(e)ular Design at the Organi),<n#rgani) <n#ter*a)es an% Ph#t#ni)s Appli)ati#ns	= enha#	Sha#	>
?	Un%erstan%ing the Relati#nship bet5een " #mp#siti#n an% Fun)ti#nalit0 in Lithium Metal S#li% Ele)tr#l0te <n#terphases	&atherine	Steinberg	.
1@	Targete% Err#r " #rre)ti#n in S#*t an% Bi#l#gj)al Materials	Ella	&ing	m
11	Fr#m Ta) .ling Plasti)s = aste t# Designing Better Ele)tri) " arsd Engineering Transp#rt Pr#)esses in S#*t Materials t# A#+an)e the Sustainable E)#n#m0	R Bharath	7en .atesh	n
1!	LiAui% Metal " atal0sts *#r Bi# an% S0nthe)i) P#l0mer P0r#l0sis	Aa%it0a ; ari	Bharani%haran	#
1(	De N#+# Pr#tein Design *#r Pr#grammable Bi#materials an% Deli+er0	Shun2hi	= ang	p
1	Neur#,Nan#te)hn#l#g08 Designing Fun)ti#nal T##is *#r Bi#ire)ti#nal Neural Engineering	Sh#i)hi	Nishitani	A
1/	" #n#r#l #* Spati#temp#ral D0nami)s #* Li+ing " ells thr#ugh Bi#m#le)ular Phase Separati#n	D#nghe#n	Lee	r
11	M#%eling " #mple\$ Sel",Assemble% Dibl#) . P#l0mer Phases in Thin Films	Ben	Magru%er	s
16	" #n#r#lling Ele)tr#)hemi)al " O! Re%u)ti#n Using " hiralit0,<n#u)e% Spin in Ele)tr#)atal0sis	9ei5an	Tan	t
1:	Data,Dr+en Dis)#+er0 an% Design #* Bi#ma)r#m#le)ular D0nami)s	Sha0na	; ilburg	u
1?	Energ0,E**i)ient Alternati+es *#r Sustainable P#l0mer Pr#)essing	Anubha+	Sarmah	+
!@	Uni#) .ing a " ir)ular " arb#n E)#n#m0 7ia ; eter#gene#us " atal0sis	= illiam	Br##mhea%	5
!1	Establishing E\$tre#m#philes As ; igh,Thr#ughput S)reening Plat#*#r #* Pr#tein Engineering	9ing0a#	Li	\$
!!	De+el#ping Bi#sens#rs *#r " hara)teri2ing Pr#tein,Metal <n#tera)ti#ns	9ing0a#	Li	aa
!(	" #mputati#nal ; eter#gene#us " atal0st Design *#r#m Material Stabilit0 t# Me)hanisti) Assessment	Ale\$an%er	; #**man	0
!	" #mputati#nal " atal0st Design an% Dis)#+er0 *#r 3reen " hemistr0 an% Rene5able Energ0 Te)hn#l#gies	Biu	9in	2
!/	De+el#pment #* Multiphase S0stems *#r En+ir#nmental Engineering Appli)ati#ns	Sam Da+i%	S5aminathan	ab
!1	A))elerating the Pa)e #* Materials Dis)#+er0 *#r Energ0 " #n+ersi#n	9in	; uang	a)
!6	The Spe)i)i)it0 an% &ineti)s #* RNA,RNA <n#tera)ti#ns	O'er	&im)hi	a%
!:	Digitali2ati#n in " hemi)al Engineering8 A))elerating S)ient'i) Dis)#+er0 an% Enabling Smarter Manu'a)turing	Daniel	La .0	l
!?	Pr#)ess <n#tensi)i)ati#n in " hemi)al Engineering C " r0stalli2ati#n8 <#pr#+ing an% R#busti0ing the Engineere% an% the Engineer	M#ntg#mer0	La .0	ae
(@	T#5ar% 3astr#intestinal 03< Tra) Therapeuti) Bi#me%i)al De+i)esF Fr#m Bi#,<n#ter*a)e Engineering t# <n#gestible Ele)tr#ni)s	; 0unah	Ahn	a*
(1	Designing R#bust " atal0sts *#r a Sustainable Future	9un#ie	" hen	ag
(!	Mi)r#s)ale Tissue Engineering t# Stu#0 7as)ular, <#mune " r#sstal. in " an)er	" hia, = en	" hang	ah
((	A#+an)ing Sustainabilit0 an% ; ealth thr#ugh Multis)ale " #mputati#nal M#%eling #* S#*t Materials	GhiAiang	Shen	ai
(	N#n,7iral Deli+er0 #* Nu)lei) A)i)s *#r 7ari#us Therapeuti) Appli)ati#ns	Manan	Ra#ith Singh	al



BOARD NUMBER	Title	First Name	Last Name	Paper Number
1/	Elementary hemispherical upgrading ; orbital arrangements From Mechanisms of Applications			

BOARD NUMBER	Title	First Name	Last Name	Paper Number
?(	S)alable Manu'a)turing #* X,Ra0 " #mpatible Mi)r#lui%i)s *#r ; igh Thr#ughput Stru)ture Determinati#n an% <ntegrate% LiAui% ; an%ing Strategies	Sartha .	Saha	%a
?	" #nne)ting <n%i+i%ual, " ell Regulati#n t# Ba)terial Bi#*ilm De+el#pment t# A%+an)e Treatment an% Engineering S#luti#ns	9ung,Shen Benn0	Tai	%b
?/	A%+an)e% " hara)teri2ati#n *#r Un%erstan%ing <nter*a)es in Sustainable " limate an% =ater Appli)ati#ns	4aguang	Ghu	%)
?1	Le+eraging Bi#p#l0mer Pr#)essing an% S0stems Thin .ing *#r the Repla)ement #* " riti)al Plasti) <n*rastru)ture	9ulie	Rielan%	%%
?6	Sili)#n Base% An#%es an% LiAui% Ele)tr#l0tes# Strategies *#r ; igh,Per*#rman)e Lithium,<#n Batteries	R#hit	" h#u%hur0	%e
?:	<ntegrating " #mputati#nal an% E\$perimental Appr#a)hes t# E\$pl#re Bl#) . " #p#l0mer Sel*,Assembl0- Mi)ellar D0nami)s- an% M#le)ular " hain Orientati#ns	Supri0a	3 upta	%*
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# 4 , Meet the Faculty and Presenters at the Poster Session

Sunday, October 27, 2024 1:00 PM - 3:00 PM

Exhibit Hall H, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
1!@	Measurement of the Li-ion Battery in the Environment	Baba .	7a% ; #. maba%	eb
1!1	Development of Functionalized Nanostucture for the Treatment of Wastewater: A Review	Luis	" aballer#	e)
1!!	Near-Infrared Fluorescent Nanosensors for Spatiotemporal Neuroimaging	9aAuesta	A%ams	e%
1!(	Engineering of the Diagnostic and Treatment of Neurodegenerative Diseases	Mar#n	Gamani	ee
1!	Real-Time Monitoring of Environmental Parameters	3uilherme	O2#ri# " ass#l	e*
1! /	Integration of Electronic Biomaterials	Xu	Ghang	eg
1!1	The Role of the Dehydrogenase in the Simulation of the Solar Energy Conversion	Suman	Samantra0	ei
1!6	Engineering of Artificial Transmembrane Membranes	R0an	Miller	e>
1! :	Molecular Simulation of the Protein Structure	Pierre	&a5a .	e .
1!?	Spectroscopic Imaging of the Hemispherical at the Interface of the Material Science	Matthe5	" #n*er	el
1(@	Preparation of the Protein Structure - Characterization of the Potential Applications	N%u . a	Ogb#nna	em
1(1	Using 3D Spatial Analysis to Assess Presumptive PFAS Contamination Sites and Develop Remediation Strategies	Angela	3utierre2	en
1(!	Bridging Thermal Electronic Materials at the Interface of the Design of the Materials Science	Sh0am	De#	e#
1((	Advancing the Molecular Engineering of Integrating the Structure, Function and Properties of the Materials Science	<e#lu5a	Babal#la	ep
1(	" Computational and Theoretical Studies of the Protein Structure, Assembly	Rahul	&umar	eA
1(/	Protein, Biomaterials and Biomimetic Cellular Agriculture Applications	Sanana	3#pala .rishnan	er
1(1	Development of Biomimetic Sensing of Natural Resources	Se+)an	Ersan	es
1(6	Integration of Structural Biomolecular Dynamics to Establish Structure, Function and Structure, Perturbations Relationships in Biological Systems	Daipa0an	Sar . ar	et
1(:	Engineering Materials Science, up to Optimal Metrics for Augmented Simulation of Batteries for Pharmaceutical Applications	An%re0	P#leta0e+	eu
1(?	Reaction Engineering of the Environmental Systems in the Environment	= en%ia	= ang	e+
1 @	Multi-functional Protein-based Biomaterials for Energy Applications	&e+in	Ni\$#n	e5
1 1	Multiscale Modeling of the Molecular Processes in Bioengineering and the Environment	3e#rge E'	&apell#s	e\$
1 !	Dehydration of the Structural Elements in the Gene-based Molecular Learning and Accelerated Nanoparticle Manufacturing, Drying and Rehydration	ShuAia#	= ang	e0
1 (	Thermodynamic Limit of Nanoparticle Disintegration in the Presence of Adsorption, Trapping Sites	Asan . a	= ierathne	e2
1	Real Time Design of the Optimal Manufacturing Uncertainty	Dustin	&ene*a . e	*a
1 /	L5, " Statistical Analysis of Drug Delivery and Fluids in Nature	Pan . a	R#hilla	*b
1 1	Engineering the Electronic Susceptibility of the Reaction Systems	E+an	Miu	*)
1 6	Accelerating the Design of the Materials for Energy Applications ; Assessing Data of the Bridge the Gap between the Topical Synthesis	9air	Favar%# , R#as	*%



BOARD NUMBER	Title	First Name	Last Name	Paper Number
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BOARD NUMBER	Title	First Name	Last Name	Paper Number
!10	Engineering "atal0sts thr#ugh Ma)hine Learning- E\$perimantal- an% Densit0 Fun)ti#nal The#r0 Meth#%s *#r Sustainable Energ0 Appli)ati#ns	Xin	= ang	. .
!11	M#%eling Flu\$#nality0 an% O**,St#i)hi#metri) Restru)turing at Ele)tr#)hemi)al <nter*a)es	Gisheng	Ghang	.m
!1!	Membranes 5ith Fun)ti#nal <ntrinsi) " a+it0 *#r <s#mer Separati#ns	Ghi5ei	9iang	.n
!1(	<ntegrati#n #* R#b#ti) ; igh,Thr#ughput E\$perimantati#n 5ith Ma)hine Learning t# A%+an)e Separati#n S)ien)e	4u'e'i	= ang	.#
!1	Rea)t#r Engineering *#r a De)arb#ni2e% " hemi)al <n#ustr0	An%re5 = '	Tri).er	.p
!1/	F#r)e% D0nami) Operati#n #* " hemi)al Rea)t#rs *#r "arb#n Management an% Pr#)ess <ntensi)i)ati#n	Austin	M#rales	.A
!11	; arnessing <nstabilities in Stru)ture% Materials *#r Enhan)e% Rea)ti#n &ineti)s an% Sel*,Assembl0	" hrist#pher	Br#5ne	.r
!16	"#ntr#lling Multi%imensi#nal Energ0 Lan%s)apes #* Resp#nsi+e S#*t Material thr#ugh Multiple Stimuli	Frie%ri)h	Stri).er	.s
!1:	Un#btrusi+e Bi#sensing Plat*#rms *#r Pers#nali2e% ; ealth M#nit#ring	9ih#ng	Min	.t
!1?	Sel*,Assembl0 #* Shape,Shi*ting " #ll#i)s	; ame%	Alm#hamma%i	.u
!6@	"#lle)ti+e Ba)terial Resp#nses in " #mple\$ En+ir#nments	&else0	; allinen	.+
!6!	Bri%ging the 3aps in M#%elling ; eter#gene#us " atal0sis Un%er Realisti) an% D0nami) "#n%iti#ns	&unran	4ang	.5
!6!	Tra)e Metal <n)#rp#rati#n thr#ugh in Situ " ati#n E\$)hange# E**e)ts #n Energ0 "#n+ersi#n an% St#rage	Raul	MarAue2	.0
!6(	Pr#perties Bi#,Base% Separati#n #* Pre)i#us Metals As a Tea)hing, F#)use% Fa)ult0 Member	3eeta	7erma	.2
!6	Ele)tr#)hemi)al Mining #* Energ0 Materials *#r#m Air- = ater- an% = aste	Ghi5ei	Fang	la
!6/	A%+an)e% Materials *#r Energ0 E**i)ent De+i)es# Ta.ing !D Materials *#r#m Lab t# Fab'	Debit	3h#shal	lb
!6!	Spe)iatin an% S#l+#a)i#it0 in M#lten Salts De)#ing the " hemistr0 #* !D Materials Using Ma)hine	; ale0	= illiams	l)
!66	Learning *#r Sustainable Energ0 an% En+ir#nmental Appli)ati#ns	M#ses Abraham	B#.inala	l%
!6:	E\$e)uti#n,Time, " erti*ie% MP " S#l+er# As Fast As Linear S0stems S#l+er	Liang	= u	le
!6?	Optimi2ing Rene5able Energies thr#ugh " #nsumer Engagement# Me%ia <n*luen)e an% S0stem Design	P#u0a	<*aei	l*
!6@	Engineering Targete% Deli+er0 S0stems *#r 3ene Therap0 an% 3ene E#iting	Allen	9iang	lg
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# 4 , Meet the Faculty and Post-Doctoral Researcher Session

Sunday, October 27, 2024 1:00 PM - 3:00 PM

Exhibit Hall H, San Diego Convention Center

BOARD NUMBER	Title	First Name	Last Name	Paper Number
(10)	Mechanical Shell Bi-Inch Enhan)es S#il Bualit0 an% Rem#es ;ea+0 Metals 'r#m =aste5ater	Shai.h	Ab%ur Ra22a.	m5
(10)	Mechanical Shell Bi-Inch Enhan)es S#il Bualit0 an% Rem#es ;ea+0 Metals 'r#m =aste5ater	;a0at	;a%%a%	m5
(10)	Mechanical Shell Bi-Inch Enhan)es S#il Bualit0 an% Rem#es ;ea+0 Metals 'r#m =aste5ater	Mu%asir	Shah	m5
(10)	"O <sub>1</sub> " #n+ersi#n t# Al)#h#ls an% Fuels B0 Therm# an% Plasm#)atal0sis	M#hamma%re2a	&#sari	m\$
(10)	able LiAui% Metal " r#sslin.e% P#I0D(- , eth0lene%#0thi#pheneE P#I0st0rene Sul'#nate DPEDOT8 PSSE " #n%u)ti+e ;0%r#gel	Bian	Gh#u	m0
(10)	Engineering Appr#a)hes *#r A%+an)ing Disease M#%eling- Therapeuti) Dis)#+er0- C Drug Deli+er0	Ali)e	Stant#n	m2
(11)	"ell,Free S0nheti) Bi#i#g08 A N#+el Plat'#r#m *#r Bi#manu'a)turing an% Diagn#sti)s	Da+i%	3ar)ia	nb
(16)	The E"e)t #* 7as)ular an% RB " Disease States #n Parti)le <nter)ti#ns	L#gan	Pieg#ls	n)
(10)	A))elerating *#m <n#rgani) Materials t# Drug Dis)#+er0 5ith Enhan)e% Sampling Meth#%s an% Ma)hine Learning	Pabl#	Gubieta	n%
(10)	NeSt,3enerati#n Materials S)ien)e8 Le+eraging Ma)hine Learning *#r Enhan)e% Un%erstan)ing an% Design	;0una	&5#n	ne
(10)	Ele)tr#)hemi)al Manu'a)turing *# 7aluable LiAui% Fuels an% Pr#%u)t Upgra)ing B0 "O! 3as Re%u)ti#n Rea)ti#n D"O!RRR an% Rea)tr Design	Tae,Ung	=i	n*
(10)	A%+an)ing Sustainable Energ0 St#rage8 <n#n+ati#ns in Materials an% Te)hn#l#gies *#r NeSt,3enerati#n Batteries	Ra#u	7a%th0a	ng
(10)	P#I0mer an% <nter'a)ial Engineering *#r Energ0 an% Sustainabilit0	Shre0as S'	Pathree.er	nh
(10)	Bi#inspire) Design *# Stru)tural Bi#nan#materials *#r Sustainable Future	<nse#.	"hae	n>
(10)	"#mputati#nal Design *# "atal0sts *#r "O! " #n+ersi#n an% =ater Splitting	Gaheer	Mas##%	n.
(10)	Appli)ati#n *# Buantum Materials in D0nami) "atal0sis	Ri)har%	Tran	nl
(10)	Upgra)ing L#5,7alue "hemi)als t# ;igh,7alue Pr#%u)ts thr#ugh "atal0ti) " #n+ersi#n 5ith Metal O\$ies	Laura A'	3#me2	nm
(10)	M#%eling the Ph0si)s *# S#t an% A)ti+e Matter *#r Bi#l#g)al Te)hn#l#gies	3esse	R#ure	np
(10)	E\$pl#ring <nter'a)ial "hemistr0 #* Natural an% Engineere% Materials t# A%#ress 3ran% "hallenges Relate%t# "arb#n Di#\$i%e Rem#+al an% =ater Reme#iati#n	S#0#ung	"h#i	nA
(10)	M#le)ular Engineering *# =ater an% AAue#us S#luti#ns *#r Energ0, =ater Appli)ati#ns	9#an	M#ntes %e O)a	nr
(10)	At#misti) Simulati#n *# Materials *#r Energ0 St#rage an% " #n+ersi#n	Samuel	3reene	ns
(10)	Sustainabilit0- an% Transmissi#n Ele)tr#n Mi)r#s)#p0 Lab#rat#r0 DSTEM LabE	Mas#u%	3hasemi	nt
(10)	L#5 Dimensi#nal 3reen Materials *#r Energ0 an% "atal0sis Appli)ati#ns	Olu5ase0i	Saliu	nu
(10)	"#mple\$ Flui%\$ an% Anis#tr#pi) S#t Materials Far *#r#m EAuilbrium	Ta%e>	Emersi)	n+
(10)	Re)#n#igurable Nan# "ube Superlatti)e Assemblies Elu)i%ate% 5ith Dimensi#nal Anal0sis	T#bias	D50er	n5
(10)	"arb#n,Negati+e an% Energ0,P#siti+e S#luti#ns 5ith the P#tentia# "a Rapi% 3t,S)ale <mplementati#n'	Mar)#	3igantin#	n\$
(10)	Ele)tr#)atal0sis Engineering T#5ar% 3reen ;0%r#ggen an% Amm#nia	Feng,4ang	"hen	n0
(10)	Me)hanisti) Stui%ies *# Ge#lite "atal0sis	9a)#b	"r#u)h	n2
(10)	"hara)terizing A%i#p#)Ote,Tum#r <nter)ellular "#mmuni)ati#n thr#ugh Bi#material an% Mi)r#lui%i) Design	Xilal	Rima	#a
(10)	A))elerating Sustainable Energ0 S#luti#ns thr#ugh Data S)ien)e an% Simulati#ns in S0nerg0 5ith E\$periments	Ritesh	&umar	#b



