PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
William F. DeGrado	05/12/2005
Dahui Liu	05/13/2005
Gregory N. Tew	11/02/2005
Michael L. Klein	05/09/2005

RECEIVING PARTY DATA

Name:	The Trustees of the University of Pennsylvania		
Street Address:	3160 Chestnut Street		
Internal Address:	Suite 200		
City:	Philadelphia		
State/Country:	PENNSYLVANIA		
Postal Code:	19104		

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	11038787

CORRESPONDENCE DATA

Fax Number: (202)371-2540

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 202-371-2600 Email: anns@skgf.com

Correspondent Name: Sterne, Kessler, Goldstein & Fox PLLC

Address Line 1: 1100 New York Avenue, NW

Address Line 4: Washington, DISTRICT OF COLUMBIA 20005

ATTORNEY DOCKET NUMBER:	1694.0590001/JMC/AES
NAME OF SUBMITTER:	/Ann E.Summerfield/

PATENT REEL: 017094 FRAME: 0616

Total Attachments: 12 source=1694-0590001 Assignment#page1.tif source=1694-0590001 Assignment#page2.tif source=1694-0590001 Assignment#page3.tif source=1694-0590001 Assignment#page4.tif source=1694-0590001 Assignment#page5.tif source=1694-0590001 Assignment#page6.tif source=1694-0590001 Assignment#page7.tif source=1694-0590001 Assignment#page8.tif source=1694-0590001 Assignment#page9.tif source=1694-0590001 Assignment#page10.tif source=1694-0590001 Assignment#page11.tif source=1694-0590001 Assignment#page12.tif

PATENT REEL: 017094 FRAME: 0617

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to each of the undersigned inventors: William F. DeGrado, Dahui Liu, Gregory N. Tew and Michael L. Klein, hereby sell and assign to The Trustees of the University of Pennsylvania, a corporation formed under the laws of the Commonwealth of Pennsylvania, whose mailing address is 3160 Chestnut Street, Suite 200, Philadelphia, PA 19104 (hereafter referred to as the Assignee), his/her entire right, title and interest, including the right to sue for past infringement and to collect for all past, present and future damages, for the United States of America (as defined in 35 U.S.C. § 100) and throughout the world,

- (a) in the invention(s) known as Facially Amphiphilic Polyaryl and Polyarylalkynyl Polymers and Oligomers and Uses Thereof for which application(s) for patent in the United States of America was filed on January 21, 2005 (also known as United States Application No. 11/038,787), in any and all applications thereon, in any and all Letters Patent(s) therefor, and
- (b) in any and all applications that claim the benefit of the patent application listed above in part (a), including non-provisional applications, continuing (continuation, divisional, or continuation-in-part) applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and
- (c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

The undersigned inventors agree to execute all papers necessary in connection with the application(s) and any non-provisional, continuing (continuation, divisional, or continuation-in-part), reissue, reexamination or corresponding application(s) thereof and also to execute separate assignments in connection with such application(s) as the Assignee may deem necessary or expedient.

The undersigned inventors agree to execute all papers necessary in connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) or any non-provisional, continuing (continuation, divisional, or continuation-in-part), reissue or reexamination application(s) thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or patent enforcement action.

The undersigned inventors hereby represent that he/she has full right to convey the entire interest herein assigned, and that he/she has not executed, and will not execute, any agreement in conflict therewith.

The undersigned inventors hereby grant Robert Greene Sterne, Esq., Registration No. 28,912; Edward J. Kessler, Esq., Registration No. 25,688; Jorge A. Goldstein, Esq., Registration No. 29,021; David K.S. Cornwell, Esq., Registration No. 31,944; Robert W. Esmond, Esq., Registration No. 32,893; Tracy-Gene G. Durkin, Esq., Registration No. 32,831; Michele A. Cimbala, Esq., Registration No. 33,851; Michael B. Ray, Esq., Registration No. 33,997; Robert E. Sokohl, Esq., Registration No. 36,013; Eric K. Steffe, Esq., Registration No. 36,688; Michael Q. Lee, Esq., Registration No. 35,239; Steven R. Ludwig, Esq., Registration No. 36,203; John M. Covert, Esq., Registration No. 38,759; Linda E. Alcorn, Esq., Registration No. 39,588; Lawrence B. Bugaisky, Esq., Registration No. 35,086; Donald J. Featherstone, Esq., Registration No. 33,876; Robert C. Millonig, Esq., Registration No. 34,395; Michael V. Messinger, Esq., Registration No. 37,575; Judith U. Kim, Esq., Registration No. 40,679; Timothy J. Shea, Jr., Esq., Registration No. 41,306; Patrick E. Garrett, Esq., Registration No. 39,987; Jeffrey Helvey, Registration No. 44,757; Heidi L. Kraus, Registration No. 43,730; Eldora Ellison, Registration No. 39,967; Thomas C. Fiala, Registration No. 43,610; all of STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C., 1100 New York Avenue, N.W., Washington, D.C. 20005-3934, power to insert in this assignment any further

IN WITNESS WHEREOF, executed	d by the undersigned inven	tors on the date opposite his/her name.
Date: 1 5/12/05	Signature of Inventor:	X W de Z-W William F. DeGrado
Subscribed and sworn to before me this 12	*	
By Jessice K Snemiko	ski	
(Notalial Seal to be allixed)	MONWEALTH OF PENNS Notarial Seal Jessica K. Incmikoski, Notary y Of Philadelphia, Philadelphi y Commission Expires Mar. 2	Public
My commission expires on: Harch & Marib	Pennsylvania Association	Of Notaries
Date:	Signature of Inventor:	Dahui Liu
Subscribed and sworn to before me this	day of	, 2005.
Ву		
(Notarial Seal to be affixed)		
My commission expires on:		
Date:	Signature of Inventor:	
	· ·	Gregory N. Tew
Subscribed and sworn to before me this	day of	, 2005.
Ву		
(Notarial Seal to be affixed)		
My commission expires on:		

Date:	Signature of Inventor:	Michael L. Klein	
Subscribed and sworn to before me this	day of	, 2005.	
Ву			
(Notarial Seal to be affixed)			
My commission expires on:			

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to each of the undersigned inventors: William F. DeGrado, Dahui Liu, Gregory N. Tew and Michael L. Klein, hereby sell and assign to The Trustees of the University of Pennsylvania, a corporation formed under the laws of the Commonwealth of Pennsylvania, whose mailing address is 3160 Chestnut Street, Suite 200, Philadelphia, PA 19104 (hereafter referred to as the Assignee), his/her entire right, title and interest, including the right to sue for past infringement and to collect for all past, present and future damages, for the United States of America (as defined in 35 U.S.C. § 100) and throughout the world,

- (a) in the invention(s) known as Facially Amphiphilic Polyaryl and Polyarylalkynyl Polymers and Oligomers and Uses Thereof for which application(s) for patent in the United States of America was filed on January 21, 2005 (also known as United States Application No. 11/038,787), in any and all applications thereon, in any and all Letters Patent(s) therefor, and
- (b) in any and all applications that claim the benefit of the patent application listed above in part (a), including non-provisional applications, continuing (continuation, divisional, or continuation-in-part) applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and
- (c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

The undersigned inventors agree to execute all papers necessary in connection with the application(s) and any non-provisional, continuing (continuation, divisional, or continuation-in-part), reissue, reexamination or corresponding application(s) thereof and also to execute separate assignments in connection with such application(s) as the Assignee may deem necessary or expedient.

The undersigned inventors agree to execute all papers necessary in connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) or any non-provisional, continuing (continuation, divisional, or continuation-in-part), reissue or reexamination application(s) thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or patent enforcement action.

The undersigned inventors hereby represent that he/she has full right to convey the entire interest herein assigned, and that he/she has not executed, and will not execute, any agreement in conflict therewith.

The undersigned inventors hereby grant Robert Greene Sterne, Esq., Registration No. 28,912; Edward J. Kessler, Esq., Registration No. 25,688; Jorge A. Goldstein, Esq., Registration No. 29,021; David K.S. Cornwell, Esq., Registration No. 31,944; Robert W. Esmond, Esq., Registration No. 32,893; Tracy-Gene G. Durkin, Esq., Registration No. 32,831; Michael A. Cimbala, Esq., Registration No. 33,851; Michael B. Ray, Esq., Registration No. 33,997; Robert E. Sokohl, Esq., Registration No. 36,013; Eric K. Steffe, Esq., Registration No. 36,688; Michael Q. Lee, Esq., Registration No. 35,239; Steven R. Ludwig, Esq., Registration No. 36,203; John M. Covert, Esq., Registration No. 38,759; Linda E. Alcorn, Esq., Registration No. 39,588; Lawrence B. Bugaisky, Esq., Registration No. 35,086; Donald J. Featherstone, Esq., Registration No. 33,876; Robert C. Millonig, Esq., Registration No. 34,395; Michael V. Messinger, Esq., Registration No. 37,575; Judith U. Kim, Esq., Registration No. 40,679; Timothy J. Shea, Jr., Esq., Registration No. 41,306; Patrick E. Garrett, Esq., Registration No. 39,987; Jeffrey Helvey, Registration No. 44,757; Heidi L. Kraus, Registration No. 43,730; Eldora Ellison, Registration No. 39,967; Thomas C. Fiala, Registration No. 43,610; all of STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C., 1100 New York Avenue, N.W., Washington, D.C. 20005-3934, power to insert in this assignment any further

PATENT. // 0694 FRAME: 0621

IN WITNESS WHEREOF, executed by the undersigned inventors on the date opposite his/her name.

Date:	Signature of Inventor:	
		William F. DeGrado
Subscribed and sworn to before me this	day of	, 2005.
Ву	·	
(Notarial Seal to be affixed)		
My commission expires on:		
Date: X 142105 5/13/05 DL	Signature of Inventor:	Dahui Liu
Subscribed and sworn to before me this <u>/3/4</u>	,	,2005.
(Notarial Seal to be affixed) PHRADELP My Com	NOTARIAL SEAL GERALDINE PETTEY Notary Public MA CITY, PHILADELPHIA C Imission Expires Nov 29,	COUNTY
My commission expires on:		
Date:	Signature of Inventor:	Gregory N. Tew
Subscribed and sworn to before me this	_day of	, 2005.
Ву	· · · · · · · · · · · · · · · · · · ·	
(Notarial Seal to be affixed)		
My commission expires on:		

Date:	Signature of Inventor	Michael L. Klein	
Subscribed and sworn to before me this	day of	, 2005.	
Ву			
(Notarial Seal to be affixed)			
My commission expires on:			

Page 3 of 3

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to each of the undersigned inventors: William F. DeGrado, Dahui Liu, Gregory N. Tew and Michael L. Klein, hereby sell and assign to The Trustees of the University of Pennsylvania, a corporation formed under the laws of the Commonwealth of Pennsylvania, whose mailing address is 3160 Chestnut Street, Suite 200, Philadelphia, PA 19104 (hereafter referred to as the Assignee), his/her entire right, title and interest, including the right to sue for past infringement and to collect for all past, present and future damages, for the United States of America (as defined in 35 U.S.C. § 100) and throughout the world,

- (a) in the invention(s) known as Facially Amphiphilic Polyaryl and Polyarylalkynyl Polymers and Oligomers and Uses Thereof for which application(s) for patent in the United States of America was filed on January 21, 2005 (also known as United States Application No. 11/038,787), in any and all applications thereon, in any and all Letters Patent(s) therefor, and
- (b) in any and all applications that claim the benefit of the patent application listed above in part (a), including non-provisional applications, continuing (continuation, divisional, or continuation-in-part) applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and
- (c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

The undersigned inventors agree to execute all papers necessary in connection with the application(s) and any non-provisional, continuing (continuation, divisional, or continuation-in-part), reissue, reexamination or corresponding application(s) thereof and also to execute separate assignments in connection with such application(s) as the Assignee may deem necessary or expedient.

The undersigned inventors agree to execute all papers necessary in connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) or any non-provisional, continuing (continuation, divisional, or continuation-in-part), reissue or reexamination application(s) thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or patent enforcement action.

The undersigned inventors hereby represent that he/she has full right to convey the entire interest herein assigned, and that he/she has not executed, and will not execute, any agreement in conflict therewith.

The undersigned inventors hereby grant Robert Greene Sterne, Esq., Registration No. 28,912; Edward J. Kessler, Esq., Registration No. 25,688; Jorge A. Goldstein, Esq., Registration No. 29,021; David K.S. Cornwell, Esq., Registration No. 31,944; Robert W. Esmond, Esq., Registration No. 32,893; Tracy-Gene G. Durkin, Esq., Registration No. 32,831; Michael A. Cimbala, Esq., Registration No. 33,851; Michael B. Ray, Esq., Registration No. 33,997; Robert E. Sokohl, Esq., Registration No. 36,013; Eric K. Steffe, Esq., Registration No. 36,688; Michael Q. Lee, Esq., Registration No. 35,239; Steven R. Ludwig, Esq., Registration No. 36,203; John M. Covert, Esq., Registration No. 38,759; Linda E. Alcorn, Esq., Registration No. 39,588; Lawrence B. Bugaisky, Esq., Registration No. 35,086; Donald J. Featherstone, Esq., Registration No. 33,876; Robert C. Millonig, Esq., Registration No. 34,395; Michael V. Messinger, Esq., Registration No. 37,575; Judith U. Kim, Esq., Registration No. 40,679; Timothy J. Shea, Jr., Esq., Registration No. 41,306; Patrick E. Garrett, Esq., Registration No. 39,987; Jeffrey Helvey, Registration No. 44,757; Heidi L. Kraus, Registration No. 43,730; Eldora Ellison, Registration No. 39,967; Thomas C. Fiala, Registration No. 43,610; all of STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C., 1100 New York Avenue, N.W., Washington, D.C. 20005-3934, power to insert in this assignment any further

PATENT REEL-60440940 PRAME: 06247

IN WITNESS WHEREOF, executed by the undersigned inventors on the date opposite his/her name.

Date:	_ Signature of In	ventor:
	- •	William F. DeGrado
Subscribed and sworn to before me this	day of	, 2005.
Ву		_
(Notarial Seal to be affixed)		
My commission expires on:		
Date:	_ Signature of In	ventor:
Subscribed and sworn to before me this	day of	, 2005.
Ву		_
(Notarial Seal to be affixed)		
My commission expires on:		
Date: X 11 2 05	_ Signature of In-	ventor: K. Megrov, Mus.
Subscribed and sworn to before me this 2/2		
By Mustine M	! Kunie	egr
(Notarial Seal to be affixed)	,	CHRISTINE M. KUMMEGA Notary Public Commonwealth of Massachusetts My Commission Expires Dec 5, 2008
My commission expires on: 12/5	108	

Date:	Signature of Inventor: Michael L. Klein	
Subscribed and sworn to before me this	day of, 2005.	
Ву		
(Notarial Seal to be affixed)		
My commission expires on:		

Page 3 of 3

In consideration of the sum of One Dollar (\$1.00) or equivalent and other good and valuable consideration paid to each of the undersigned inventors: William F. DeGrado, Dahui Liu, Gregory N. Tew and Michael L. Klein, hereby sell and assign to The Trustees of the University of Pennsylvania, a corporation formed under the laws of the Commonwealth of Pennsylvania, whose mailing address is 3160 Chestmut Street, Suite 200, Philadelphia, PA 19104 (hereafter referred to as the Assignee), his/her entire right, title and interest, including the right to sue for past infringement and to collect for all past, present and future damages, for the United States of America (as defined in 35 U.S.C. § 100) and throughout the world.

- (a) in the invention(s) known as Facially Amphiphilic Polyaryl and Polyarylalkynyl Polymers and Oligomers and Uses Thereof for which application(s) for patent in the United States of America was filed on January 21, 2005 (also known as United States Application No. 11/038,787), in any and all applications thereon, in any and all Letters Patent(s) therefor, and
- (b) in any and all applications that claim the benefit of the patent application listed above in part (a), including non-provisional applications, continuing (continuation, divisional, or continuation-in-part) applications, reissues, extensions, renewals and reexaminations of the patent application or Letters Patent therefor listed above in part (a), to the full extent of the term or terms for which Letters Patents issue, and
- (c) in any and all inventions described in the patent application listed above in part (a), and in any and all forms of intellectual and industrial property protection derivable from such patent application, and that are derivable from any and all continuing applications, reissues, extensions, renewals and reexaminations of such patent application, including, without limitation, patents, applications, utility models, inventor's certificates, and designs together with the right to file applications therefor; and including the right to claim the same priority rights from any previously filed applications under the International Agreement for the Protection of Industrial Property, or any other international agreement, or the domestic laws of the country in which any such application is filed, as may be applicable;

all such rights, title and interest to be held and enjoyed by the above-named Assignee, its successors, legal representatives and assigns to the same extent as all such rights, title and interest would have been held and enjoyed by the Assignor had this assignment and sale not been made.

The undersigned inventors agree to execute all papers necessary in connection with the application(s) and any non-provisional, continuing (continuation, divisional, or continuation-in-part), reissue, reexamination or corresponding application(s) thereof and also to execute separate assignments in connection with such application(s) as the Assignee may deem necessary or expedient.

The undersigned inventors agree to execute all papers necessary in connection with any interference or patent enforcement action (judicial or otherwise) related to the application(s) or any non-provisional, continuing (continuation, divisional, or continuation-in-part), reissue or reexamination application(s) thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or patent enforcement action.

The undersigned inventors hereby represent that he/she has full right to convey the entire interest herein assigned, and that he/she has not executed, and will not execute, any agreement in conflict therewith.

The undersigned inventors hereby grant Robert Greene Sterne, Esq., Registration No. 28,912; Edward J. Kessler, Esq., Registration No. 25,688; Jorge A. Goldstein, Esq., Registration No. 29,021; David K.S. Cornwell, Esq., Registration No. 31,944; Robert W. Esmond, Esq., Registration No. 32,893; Tracy-Gene G. Durkin, Esq., Registration No. 32,831; Michele A. Cimbala, Esq., Registration No. 33,851; Michael B. Ray, Esq., Registration No. 33,997; Robert E. Sokohl, Esq., Registration No. 36,013; Eric K. Steffe, Esq., Registration No. 36,688; Michael Q. Lee, Esq., Registration No. 35,239; Steven R. Ludwig, Esq., Registration No. 36,203; John M. Covert, Esq., Registration No. 38,759; Linda E. Alcorn, Esq., Registration No. 39,588; Lawrence B. Bugaisky, Esq., Registration No. 35,086; Donald J. Featherstone, Esq., Registration No. 33,876; Robert C. Millonig, Esq., Registration No. 34,395; Michael V. Messinger, Esq., Registration No. 37,575; Judith U. Kim, Esq., Registration No. 40,679; Timothy J. Shea, Jr., Esq., Registration No. 41,306; Patrick E. Garrett, Esq., Registration No. 39,987; Jeffrey Helvey, Registration No. 44,757; Heidi L. Kraus, Registration No. 43,730; Eldora Ellison, Registration No. 39,967; Thomas C. Fiala, Registration No. 43,610; all of STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C., 1100 New York Avenue, N.W., Washington, D.C. 20005-3934, power to insert in this assignment any further

IN WITNESS WHEREOF, executed by the undersigned inventors on the date opposite his/her name.

Date: Signature of Inventor: William F. DeGrado Subscribed and sworn to before me this ______ day of _______, 2005. (Notarial Seal to be affixed) My commission expires on: Date: Signature of Inventor: Dahui Liu Subscribed and sworn to before me this ______ day of ______, 2005. (Notarial Seal to be affixed) My commission expires on: Date: Signature of Inventor: Gregory N. Tew Subscribed and sworn to before me this ______ day of ______, 2005. (Notarial Seal to be affixed) My commission expires on:

Page 2 of 3

ate: Y 05/09/05 Signature of Inventor: Y W. Cee

Michael L. Klein

Subscribed and sworn to before me this

, 2005.

(Notarial Seal to be affixed)

COMMONWEALTH OF PENNSYLVANIA

NOTARIAL SEAL TERESA M. DUNN, Notary Public City of Philadelphia, Phila: County My Commission Expires August 12, 2007

My commission expires on: