## 505553908 07/02/2019 PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5600709

SUBMISSION TYPE:		NEW ASSIGNMENT	NEW ASSIGNMENT			
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT			
CONVEYING PARTY DA	ATA	•				
		Name	Execution Date			
LIANG HUANG			02/06/2017			
YUANXI LIAO	02/02/2017					
PATRICK MCCARTHY	02/01/2017					
RECEIVING PARTY DA	TA					
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Property Type Application Number:		Number 16458920				
		16458920				
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## ASSIGNMENT OF NON-PROVISIONAL APPLICATION

WHEREAS, the undersigned hereby: INSERT (1) Liang Huang (2) Yuanxi Liao NAME(S) OF (3) Patrick McCarthy x box if continued on page 2 INVENTOR(S) (collectively hereinafter "ASSIGNOR") has/have made an invention entitled: TITLE OF Surfactant-Compatible Star Macromolecules INVENTION for which an application for Letters Patents: (A) 🖾 was filed on July 2, 2015 as Application No. PCT/US2015/039066 and (B) was filed on December 29, 2016 as Application No. US 15/322,967 AND WHEREAS INSERT ATRP Solutions, Inc. NAME(S) AND 855 William Pitt Way ADDRESS(ES) OF ASSIGNEE(S) Pittsburgh, Pennsylvania 15238 United States of America

(hereinafter "ASSIGNEE"). desires to acquire an interest therein of the above-identified invention;

NOW, THEREFORE. In consideration of good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR, does hereby sell, assign and transfer unto ASSIGNEE, its successors, assigns and legal representatives, the full and exclusive right, title and interest to the said invention in the United States and all foreign countries, as described in the aforesaid application, and to the said application and all applications claiming priority thereto under 35 U.S.C. §119(e) and to all continuations, divisions, and renewals thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications for all forms of industrial property protection and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention 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, and ASSIGNOR hereby authorizes and requests the Commissioner of Patents to issue said Letters Patent to ASSIGNEE. for its interest as ASSIGNEE, its successors, assigns and legal representatives;

AND ASSIGNOR hereby agrees, without further remuneration, to execute any papers requested by ASSIGNEE, its successors, assigns and legal representatives, deemed essential for ASSIGNEE's full protection and title in and to the invention hereby transferred; and additionally, the undersigned further authorize(s) Jones Day, 51 Louisiana Avenue, N.W., Washington, D.C. 20001, to insert hereon any further identification necessary or desirable for recordation of this document.

IN TESTIMONY WHEREOF, we hereunto set our respective signatures on the day and year set forth below.

	INVENTOR SIGNATURES	DATE SIGNED	WITNESSES
1) Name:	Liang Huang	2/6/2017	Miste Detrat
2) Name:	Yuanxi Liao	2/2/17	Milore Departy
3) Name:	Patrick McCarthy Patrick McCarthy	2/1/17	Mirey Departy

PATENT REEL: 049649 FRAME: 0692

**RECORDED: 07/02/2019**