CH \$40.00 133723 10847803

Bradley D. Craig Brant U. Kolb Joel D. Oxman October 15, 2004 October 15, 2004 3M Innovative Properties Company P.O. Box 33427 St. Paul, Minnesota 55133-3427 Additional name(s) of conveying party(les) attached? Additional name(s) of receiving party(les) attached? Yes ⊠ No Additional name(s) of conveying party(les) attached? Yes ⊠ No Merger Change of Name 3. Nature of conveyance: Security Agroement Other: Merger Change of Name 4. Application or patent number(s) □ This document is being filed together with a new application other: 4. Application or patent number(s) □ This document is being filed together with a new application other: 10/847803 B. Patent No(s). 10/847803 6. Total number of applications and patents involved: Name: Sean J. Edman Office of Intellectual Property Counsel 3M Innovative Properties Company Phone Number: 651-736-3833 6. Total number of applications and patents involved: 32692 Customer Number 32692 Customer Number 7. Total fee (37 CFR §§ 1.21(h) & 3.41): \$4 Ø Payment Information: Deposit Account Number: 13-3723 Benotesed S. Payment Information:	11US002	Case No.: 59611US			
To: The Director of the U.S. Patent and Trademark Office: Please record the attached document(s) or the new address(es) below. 1. Name of conveying party(les) Execution Date(s): Bradley D. Craig October 15, 2004 Bradley D. Craig October 15, 2004 Brant U. Kolb October 15, 2004 Joel D. Oxman October 15, 2004 Additional name(s) of conveying party(les) attached? St. Paul, Minnesota 55133-3427 Yes No 3. Nature of conveyance: Merger Socurity Agreement Change of Name Cther: This document is being filed together with a new application A. Patent Application No(s). This document is being filed together with a new application Office of Intellectual Property Counsel St. Total number of applications Office of Intellectual Property Counsel St. Total number of applications Minnovative Properties Company Total fee (37 CFR §§ 1.21(h) & 3.41): \$4 Enclosed Authorized to be charged to deposit account \$. Payment Information: Deposit Account Number: 13-3723 Properties Company				RE	
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Autorized Oser Name. Sean J. Lonian		Authorized User Name: Sean J. Edman			
9. Signature:). Signature:	
Printed Name of Attorney/Agent: Sean J. Edman Registration No.: 42,506		man Nov. 2, 2004		Printed Name of Attorney/Agent: Sean J. Edman	
	3		COVER SHEET, atta	Pages: Total number of pages Including	

PATENT REEL: 015327 FRAME: 0717

Case No.: 59611US002

ASSIGNMENT OF APPLICATION

Whereas I/we, the below named inventor(s), with residence and citizenship as indicated below, have made an invention in

USE OF NANOPARTICLES TO ADJUST REFRACTIVE INDEX OF DENTAL COMPOSITIONS

for which an application for a United States Patent is being filed contemporaneously herewith;

A for which an application for a United States Patent identified as U.S. Patent Application No. 10/847803; was filed on May 17, 2004;

which application is identified as PCT International Patent Application No. filed ;

Now, therefore, for good and valuable consideration, receipt of which is acknowledged, I/we have agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly-owned subsidiary of 3M COMPANY, and a corporation of Delaware, having its principal office at Saint Paul, Minnesota, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any division or continuation (in whole or in part) of said application, and in and to any and all improvements in the said invention made by me or made jointly with others (provided any such improvement is made during, or within one year after the termination of, my employment with 3M COMPANY and any of its existing or future subsidiaries), and in and to any and all Letters Patent, reexaminations, reissues, or extensions thereof, of the United States of America and countries foreign thereto (including the right to apply for Letters Patent, Utility Models, or Inventors' Certificates in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon the said Invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by me/us had this assignment and transfer not been made;

I/We do further agree for myself/ourselves and for my/our heirs, executors, and administrators, to execute and deliver without further consideration any further applications, assignments, and documents, and to perform such other acts as I/we lawfully may, that may be deemed necessary by said Company, its successors, assigns, and nominees, fully to secure its right, title, and interest as aforesaid and to obtain or maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries; and

I/We do hereby authorize and request the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of the said applications, to said 3M Innovative Properties Company, as the assignee of the entire right, title, and interest therein.

In witness whereof, I/we have signed my/our name(s) on the day and year set forth below.

Given Name (first and middle [if any]): Bradley D.	Family Name or Sur Craig	name:
Inventor's Signature:	Date: 10/15/	loy
Residence: Cottage Grove, MN	Country: USA	Citizenship: United States of America
Winder -	Qumber 1	Dicholson

Page 1 of 2

Given Name (first and middle [if any]): Brant U.	Family Name or Surnar Kolb	me:	
Inventor's Signature:	Date:		
Brant M. Kalt	10/15/04		
Afton, MN	Country: USA	Citizenship: United States of America	
Witness Witness .	Bin E	efstrom	
Given Name (first and middle [if any]): Joel D.	Family Name or Surnar Oxman	ne:	
Inventor's Signature: Joel J. Johnson Residence:	Date: 10/15/04		
Pesidence: -Minneapolis, MN	Country: USA	Clüzenship: United States of America	
Jalanton -	Lim Elfstrom		
Given Name (first and middle [if any]): Robert F.	Family Name or Sumame: Peez		
Inventor's Signature:	Date:		
Residence: Germering, Germany	Country: Germany	Citizenship: German	
Witness	Witness		
Given Name (first and middle [If any]): Sybille S.	Family Name or Surnar Frank		
Inventor's Signature:	Date:	Date:	
Residence: Seefeld, Germany	Country: Germany	Citizenship: German	
Witness	Witness		

Assignment

RECORDED: 11/02/2004