

**PATENT ASSIGNMENT**

Electronic Version v1.1  
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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT								
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT								
<b>CONVEYING PARTY DATA</b>									
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:70%;">Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Santosh Kumar Gangwal</td> <td>10/09/2007</td> </tr> <tr> <td>Brian Scott Turk</td> <td>10/08/2007</td> </tr> <tr> <td>Raghubir Prasael Gupta</td> <td>10/09/2007</td> </tr> </tbody> </table>		Name	Execution Date	Santosh Kumar Gangwal	10/09/2007	Brian Scott Turk	10/08/2007	Raghubir Prasael Gupta	10/09/2007
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Santosh Kumar Gangwal	10/09/2007								
Brian Scott Turk	10/08/2007								
Raghubir Prasael Gupta	10/09/2007								
<b>RECEIVING PARTY DATA</b>									
<b>Name:</b>	Research Triangle Institute								
<b>Street Address:</b>	3040 Cornwallis Road; P.O. Box 12194								
<b>City:</b>	Research Triangle Park								
<b>State/Country:</b>	NORTH CAROLINA								
<b>Postal Code:</b>	27709								
<b>PROPERTY NUMBERS Total: 1</b>									
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;">Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>11771396</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	11771396				
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Application Number:	11771396								
<b>CORRESPONDENCE DATA</b>									
<b>Fax Number:</b>	(919)862-2260								
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>									
<b>Phone:</b>	919-862-2213								
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<b>Correspondent Name:</b>	Christopher M. Humphrey								
<b>Address Line 1:</b>	3201 Beechleaf Court, Suite 600								
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<b>ATTORNEY DOCKET NUMBER:</b>	031037/330519								
<b>NAME OF SUBMITTER:</b>	Christopher M. Humphrey								
<b>Total Attachments: 4</b> source=330519Assignment#page1.tif source=330519Assignment#page2.tif									

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**ASSIGNMENT - WORLDWIDE**

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor has sold and assigned, and by these presents hereby sells and assigns, unto

Research Triangle Institute  
P.O. Box 12194  
3040 Cornwallis Road  
Research Triangle Park, NC 27709

its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries in and to the invention in **"ZINC OXIDE-BASED SORBENTS AND PROCESSES FOR PREPARING AND USING SAME"**

as set forth in this United States Patent Application

- executed concurrently herewith  
 executed on  
 Application No. 11/771,396; filed June 29, 2007  
 Application claims priority from Application No. , filed , all applications listed above being hereinafter referred to as the "application(s)";

(We hereby authorize and request the Assignee and its attorney (Alston & Bird LLP) to insert above the application number and filing date of said application when known.)

said application for United States Letters Patent, including all divisional, renewal, substitute, continuation, nonprovisionals, continuation-in-parts, and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues, reexaminations, and extensions of Letters Patent granted for said inventions or upon said applications and every priority right that is or may be predicated upon or arise from said inventions, said applications, and said Letters Patent; said Assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said Assignee or otherwise as said Assignee may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to issue or transfer all said Letters Patent to said Assignee in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right theretofore given, and that the undersigned will do all acts reasonably serving to ensure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said Assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, declarations, and lawful affidavits in form and substance which may be requested by said Assignee, to furnish said Assignee with all facts relating to said inventions or the history thereof and any and all documents, photographs,

Oct 9, 2007  
Date

Raghubir P. Gupta  
Raghubir Prasael Gupta

State of North Carolina )

County of Alamance )

I, Donnie L. Dietrich, a Notary Public for said County and State, do hereby certify that Raghubir Prasael Gupta personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 9<sup>th</sup> day of October, 2007.

(Official Seal)

Donnie L. Dietrich  
Notary Public

My commission expires April 17, 2010

Attorney Docket No. 031037/330519



October 8, 2007  
Date

Brian Scott Turk  
Brian Scott Turk

State of North Carolina)

County of Alamance)

I, Donnie S. Dietrich, a Notary Public for said County and State, do hereby certify that Brian Scott Turk personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 8<sup>th</sup> day of October, 2007.

(Official Seal)

Donnie S. Dietrich  
Notary Public

My commission expires April 17, 2010



models, samples or other physical exhibits which may embody said inventions, and to testify in any proceedings relating to said inventions, patent applications, and/or Letters Patent.

The undersigned hereby grant(s) an authorized representative of Assignee the power to insert in this Assignment any further identification that may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

October 8, 2007  
Date

Santosh Kumar Gangwal  
Santosh Kumar Gangwal

State of North Carolina )  
County of Alamance )

I, Donnie L. Dutch, a Notary Public for said County and State, do hereby certify that Santosh Kumar Gangwal personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 8<sup>th</sup> day of October, 2007.

(Official Seal)

Donnie L. Dutch  
Notary Public

My commission expires April 17, 2010