Abstract:

Title: SEPARATION OF FULLERENE C_{60} AND C_{70} USING CRYSTALLIZATION

A method for separating two highly pure fullerenes from a solution via crystallization. The method can be applied for various two fullerenes-solvent systems and obtains up to 99.99% pure fullerenes, with relatively low production and separation cost.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - C01B 31/02 (2007.10)
USPC - 423/445R; 977/845
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
USPC-- 423/445R; 977/845

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched USPC-- 210/638, 423/461; 977/734 (see search terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
GOOGLE SCHOLAR, GOOGLE PATENT and WEST (PGBP.USPT;EPAB.JPAB): separation, fullerene, crystallization, C60, C70; toluene or dimethylbenzene or tetr methylbenzene or tetramethylbenzene or tetrahydro naphthalene or chloronaphthalene or iodosbenze or pyrroldine

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category*</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>ISLAMOVA. Thermodynamic properties of C60 fullerene solutions in individual and mixed (C6H4-C6H5CH3 and C6H4-1,2-C6H4Cl2) organic solvents. Doctoral Thesis September 2005, retrieved from the Internet 03 August 2007 &lt; <a href="http://www.isc-ras.ru/dissert/avtoreferats/lslamova.doc%3E">http://www.isc-ras.ru/dissert/avtoreferats/lslamova.doc&gt;</a></td>
<td>1-22</td>
</tr>
<tr>
<td>A</td>
<td>STUKALIN et al. TERNARY SYSTEM OF C60 AND C70 WITH 1,2-DIMETHYLBENZENE FULLERENE SCIENCE AND TECHNOLOGY, February 2001, 9(1);113-130</td>
<td>1-22</td>
</tr>
</tbody>
</table>

D. Further documents are listed in the continuation of Box C.

Date of the actual completion of the international search
22 October 2007 (22.10.2007)

Date of mailing of the international search report
14 DEC 2007

Name and mailing address of the ISA/US
Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-3201

Authorized officer: Lea W. Young
PCT Helpdesk 571-272-4300
PCT DSP 571-272-7774

Form PCT/ISA/210 (second sheet) (April 2007)