10-13-1999 FORM PTO-1595 **U.S. DEPARTMENT OF COMMERCE** OVER Patent and Trademark Office (Rev. 6-93) OMB No. 0651-0011 (exp. 4/94) 101170252 Tab settings □ □ □ ▼ To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof. 1. Name of conveying party(les): 2. Name and address of receiving party(les) Lewis M. Fraas JX Crystals Inc. Name: Galen Magendanz James E. Avery Internal Address:_ Additional name(s) of conveying party(les) attached? Q Yes (A No 3. Nature of conveyance: Street Address: 1105 12th Avenue, N.W., XX Assignment □ Merger Suite A2 ☐ Security Agreement Change of Name ZIP: 98027 City:_ Issaquah Other ___ Execution Date: _____September 24, 1999 Additional name(s) & address(es) attached? 🔾 Yee 🗷 No WED 9.28.99 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: $\frac{09/24/99}{1}$ A. Patent Application No.(s) B. Patent No.(s) Additional numbers attached?

Yes No. 5. Name and address of party to whom correspondence 6. Total number of applications and patents involved: concerning document should be mailed: /08/1999 MPEOPLES 00000025.09486727 FC:581 7. Total fee (37 CFR 3.41)......\$\\\\ 40.00 40.00 Op Internal Address: Enclosed Authorized to be charged to deposit account Street Address: 1493 Chain Bridge Road 8. Deposit account number: Suite 300 02 - 3704City: McLean State: VA ZIP: 22101 (Attach duplicate copy of this page if paying by deposit account) DO NOT USE THIS SPACE 9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. helieff Greeners September 28, 1999 Julie H. Gamotis Name of Person Signing Total number of pages including cover sheet, attachments, and document:

> Mail documents to be recorded with required cover sheet information to: Commissioner of Patents & Trademerks, Box Assignments Washington, D.C. 20231

> > **PATENT**

REEL: 010298 FRAME: 0020

JOINT ASSIGNMENT

WHEREAS, LEWIS M. PRAAS, GALEN MAGENDANZ and JAMES E. AVERY and LEWIS M. FRAAS, hereinafter referred to as the ASSIGNORS, have jointly invented certain improvements relating to ANTIREFLECTION COATED REFRACTORY METAL MATCHED EMITTERS FOR USE IN THERMOPHOTOVOLTAIC GENERATORS, for which they jointly executed on even date herewith an application for Letters Patent to be filed in the United States Patent Office:

AND WHEREAS, JX CRYSTALS INC., a Washington corporation, located and doing business at 1105 12th Avenue, N.W., Suite A2, Issaguah, Washington 98027, hereinsfter referred to as the ASSIGNEE, is desirous of acquiring the entire right, title and interest in and to said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, and prolongations thereof;

NOW, THIS WITNESSETH that for and in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt whereof is hereby acknowledged, said ASSIGNORS hereby assign, sell, and transfer to said ASSIGNEE, its assigns and legal representatives, the entire and exclusive right, title, and interest in and to said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, and prolongations thereof, said ASSIGNEE and its assigns and legal representatives to have, hold, exercise, and enjoy the said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, and prolongations thereof, with all the rights, powers, privileges, and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such Letters Patent when granted, including any and all renewals, reissues, and prolongations thereof, for the use and benefit of said ASSIGNEE and its assigns and legal representatives, in as ample and beneficial a manner to all intents and purposes as said ASSIGNORS might or could have held and enjoyed the same, if this assignment had not been made;

AND said ASSIGNORS hereby agree to execute all papers that may be necessary to file applications in the United States and foreign countries for said invention and to assign the same to said ASSIGNEE, or any assignee acquiring title to said invention, and to execute any other papers that may be needed in connection with filing said application and securing Letters Patent thereon;

AND said ASSIGNORS authorize and request the Commissioner of Patents to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said ASSIGNEE, its assigns and legal representatives, in accordance herewith.

IN TESTIMONY WHEREOF, this assignment is executed by said ASSIGNORS the day and year set forth below.

Executed at ISSAPUAN, WA

(Town & Country) | 9 7

Executed at 1-550 and WA

(Town & Country)

On 12471999

Executed at 1550 quah, WA

(Town & Country)

On 15771999

Lewis M. Frans

calen Magendanz

James E. Avery

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RECORDED: 09/28/1999