

WISCONSIN ALUMNI RESEARCH FOUNDATION

September 8, 1980

Ms. Lucy Petitt Paralegal Office of the General Counsel National Science Foundation Washington, D.C. 20550

Dear Ms. Petitt:

Re: Institutional Patent Agreement University of Wisconsin - National Science Foundation

Attached you will find the various form sheets adopted by the National Science Foundation for the reporting of inventions under the Institutional Patent Agreement with the University of Wisconsin, which sheets will comprise the annual report called for under that Agreement. The report addresses the period from July 1, 1979 through June 30, 1980, which represents the fiscal year of the Wisconsin Alumni Research Foundation, the designee of the University of Wisconsin, under the Agreement.

In our letter of August 16, 1978 to Mr. Frank L. Huband we presented some commentary on this type of annual report and refer you to that letter for our comments which we believe are still appropriate.

Very truly yours,

UNIVERSITY OF WISCONSIN

By

Reuben H. Lorenz, Vice President and Controller

WISCONSIN ALUMNI RESEARCH FOUNDATION

By Howard W. Bremer, Patent Counsel

RHL:HWB:rw Enc.

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OMB NO. 99-R0308 APPROVAL EXPIRES: April 30, 1981

STATUS OF NSF-FUNDED INVENTION

No change from 1979

NSF File Number: 74-62 Disclosure Date: 3/26/74 Waiver Date: Inventor(s): Anderson et al Grantee Institution: Wisconsin Invention Title: Molecular Nitrogen Laser Individual or Organization seeking licensees for invention: X U.S. Patent Application filed. Date: 5/20/75; S.N.: 579.268 U.S. Patent granted. Date: 2/28/78; No.: 4,077,020 Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication? If so: Journal title: ; Date: *Anderson, Louis W. FIRST LICENSEE: Fitzsimmons, William A.; Date of license: 4/11/78. National Research Group, Inc.
Total license payments to grantee before Oct. 1, 1976: \$0.0 Payments from Oct. 1, 1976 to Sep. 30, 1977: \$0.0 ; Oct. 1, 1977 to Sep. 30, 1978: \$0.0 ; Oct. 1, 1978 to Sep. 30, 1979: \$0.0 Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description: ; Date of license: SECOND LICENSEE: Total license payments to grantee before Oct. 1, 1976: \$ Payments from Oct. 1, 1976 to Sep. 30, 1977: \$ ____; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$ Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description: Please provide above information for further licenses on the back, and check here: . Is invention available to other licensees? . Are you still actively seeking licensees? Yes x FOREIGN PATENT STATUS Filing No. Date Granted Patent No. Country of filing Filing date

^{*}Invention was put into use by inventors and their jointly owned Company before patent issued. Royalty-free license was issued to inventors and to their jointly owned Company under waiver provisions from Department of Energy.

NSF File Number: 79-21 Disclosure Date: 12/6/78 Waiver Date:
Grantee Institution: Wisconsin Inventor(s): Davida-Kam
Invention Title: A Complete Substitution Permutation Enciphering and Deciphering Circuit Individual or Organization seeking licensees for invention:
WARF
$\boxed{\text{x}}$ U.S. Patent Application filed. Date: $\boxed{10/2/78}$; S.N.: $\boxed{947,428}$.
U.S. Patent granted. Date:; No.:
Status of patent application if not yet granted: Application under Amendme If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title: ; Date:
FIRST LICENSEE:; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date:; Description:
SECOND LICENSEE:; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
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Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes X No
Foreign patent status
Country of filing Filing date Filing No. Date Granted Patent No.

NSF File Number: 77-36 Disclosure Date: 12/22/76 Waiver Date:
Grantee Institution: Wisconsin Inventor(s): Davida-Wells
Invention Title: Digital Data Enciphering and Deciphering Circuit and Metho
Individual or Organization seeking licensees for invention: WARF X U.S. Patent Application filed. Date: 10/3/77; S.N.: 839.034
X U.S. Patent granted. Date: 5/6/80; No.: 4,202,051
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication? .
If so: Journal title:; Date:
FIRST LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$.
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Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes x No
FORETCH PATENT STATUS

Filing No. Date Granted Patent No. Country of filing Filing date

NSF File Number: Disclosure Date: 6/17/80 Waiver Date: 80-73-MCS77-02156
Grantee Institution: Wisconsin Inventor(s): Davida-Wells-Kam
Invention Title: A Database Encryption System with Subkeys
Individual or Organization seeking licensees for invention:
WARF WIU.S. Patent Application filed. Date: 1/30/80; S.N.: 117,140
U.S. Patent granted. Date:; No.:
Status of patent application if not yet granted: Awaiting 1st Office Action If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title: ; Date:
FIRST LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
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בואסטבוראן איייבאיי פואסטור

FOREIGN PATENT STATUS

Country of filing Filing date Filing No. Date Granted Patent No.

NSF File Number: 79-97 Disclosure Date: 7/2/79 Waiver Date:
Grantee Institution: Wisconsin Inventor(s): Davies-Harford
Invention Title: Enzymatic Assay of Aminoglycoside Antibiotics in Serum, Urine, Effluents, Animal Feeds, etc. Individual or Organization seeking licensees for invention: WARF WU.S. Patent Application filed. Date: 11/13/79; S.N.: 93.758
A 10.00. Ideanc Application lited. Date. 11/13//9, 5.00. 93,/30
U.S. Patent granted. Date: ; No.:
Ist Office Action - Status of patent application if not yet granted: Amendment due 10/24/80 If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title: ; Date:
FIRST LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
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Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
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Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes X No
FOREIGN PATENT STATUS
Country of filing Filing date Filing No. Date Granted Patent No.

NSF File Number: Disclosure Date: 12/4//9 Waiver Date:
80-19-INT-76-05793 Grantee Institution: Wisconsin Inventor(s): DeLuca-Ikekawa-Tanaka
Kobayashi Invention Title: 24,24-Difluoro-25-Hydroxycholecalciferol
Individual or Organization seeking licensees for invention:
warf
X U.S. Patent Application filed. Date: 3/5/79; S.N.: 017,168
\times U.S. Patent granted. Date: $4/1/80$; No.: $4,196,133$.
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title: ; Date:
FIRST LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
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SECOND LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
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Please provide above information for further licenses on the back, and check here: . Is invention available to other licensees? Are you still actively seeking licensees? Yes X
FOREIGN PATENT STATUS
Country of filing Filing date Filing No. Date Granted Patent No.
Australia 2/22/80 55809/80
Canada 2/28/80 346646
Israel 10/22/79 5/8525
New Zealand 2/8/80 192826 • Belgium 3/3/80 199639 •
Great Britain $3/3/80$ 8007118

(continued next page)

Ireland	3/3/80	420/80
France	3/4/80	8004852
Italy	3/3/80	20326A/80
Denmark	10/15/79	
W. Germany	10/15/79	
Holland	10/15/79	
Japan	10/15/79	
Switzerland	10/15/79	
Sweden	10/15/79	

NSF File Number: Disclosure Date: 12/4/79 Waiver Date:
80-20-INT-76-05793 Grantee Institution: Wisconsin Inventor(s): DeLuca-Schnoes-Ikek Tanaka-Kobayashi
Invention Title: 24,24-Difluoro- 1α ,25-Dihydroxycholecalciferol
Individual or Organization seeking licensees for invention:
THE CONTROL WARF
X U.S. Patent Application filed. Date: 3/28/79 ; S.N.: 024,848
X U.S. Patent granted. Date: 5/6/80; No.: 4.201.881
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title:; Date:
FIRST LICENSEE:; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
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Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes X No
FOREIGN PATENT STATUS Country of filing Filing date Filing No. Date Granted Patent No. Australia 2/22/80 55810/80 Canada 1/17/80 343886 Israel 10/22/79 58526 New Zealand 10/23/79 191900 Belgium 3/7/80 199728 Great Britain 3/13/80 8008488 (continued next page)
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Ireland	3/26/80	619/80
France	3/17/80	8005935
Italy	3/11/80	20508A/80
Denmark	10/15/79	
W. Germany	10/15/79	
Holland	10/15/79	
Japan	10/15/79	
Switzerland	10/15/79	
Sweden	10/15/79	

NSF File Number: Disclosure Date: 12/4/79 Waiver Date: 80-20-INT-76-05793
Grantee Institution: Wisconsin Inventor(s): DeLuca-Schnoes-Ikekawa- Tanaka-Kobayashi
Invention Title: 24,24-Difluoro- 1α ,25-Dihydroxycholecalciferol
Individual or Organization seeking licensees for invention:
WARF COLUMN COLU
X U.S. Patent Application filed. Date: 8/6/79; S.N.: 064,254 (Division of U.S. S.N. 024,848)
U.S. Patent granted. Date: No.:
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication? .
If so: Journal title:; Date:
FIRST LICENSEE: ; Date of license:
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Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes x No
FORETGN PATENT STATTIS

Filing date Filing No. Date Granted Patent No.

Country of filing

NSF File Number: 80-68 Disclosure Date: 5/21/80 Waiver Date:
Grantee Institution: Wisconsin Inventor(s): Hart-Blackbourn
Invention Title: Multiple-Frequency-Generation for NMR Spectroscopy
Individual or Organization seeking licensees for invention:
WARF
U.S. Patent Application filed. Date: ; S.N.: No patent application filed to date pending new research data. U.S. Patent granted. Date: ; No.:
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication? .
If so: Journal title:; Date:
FIRST LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
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Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes
FOREIGN PATENT STATUS

Country of filing Filing date Filing No. Date Granted Patent No.

NSF File Number: 79-64 Disclosure Date: 3/21/79 Waiver Date:
Grantee Institution: Wisconsin Inventor(s): Hartwig-Perepezko
Invention Title: Strengthened Metallic Alloys for High Conductivity Application at Cryogenic Temperatures Individual or Organization seeking licensees for invention:
WARF X U.S. Patent Application filed. Date: 10/12/79; S.N.: 84,199
U.S. Patent granted. Date: ; No.:
Status of patent application if not yet granted: under Amendment If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title:
FIRST LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
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Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes x No
FOREIGN PATENT STATUS Country of filing Filing date Filing No. Date Granted Patent No.

STATUS OF NSF-FUNDED INVENTION April 30, 1981

NSF File Number: Disclosure Date: 7/22/80 Waiver Date: 80-90-ENG-72-04229
Grantee Institution: Wisconsin Inventor(s): Langer-Pate
Invention Title: Electrogenerative Reduction of Nitrogen Oxides
Individual or Organization seeking licensees for invention:
WARF
X U.S. Patent Application filed. Date: 5/23/80; S.N.: 152,728
U.S. Patent granted. Date: ; No.:
Status of patent application if not yet granted: Awaiting 1st Office Action If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title:; Date:
FIRST LICENSEE:; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
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Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes x No .
FOREIGN PATENT STATUS Country of filing Filing date Filing No. Date Granted Patent No.

OMB NO. 99-R0308 APPROVAL EXPIRES:

STATUS OF NSF-FUNDED INVENTION April 30, 1981

No change from 1979 NSF File Number: 74-52 Disclosure Date: 2/22/74 Waiver Date:
Grantee Institution: Wisconsin Inventor(s): Mayhugh-Fullerton
Invention Title: Sensitized Thermoluminiscent Phosphor and Method
Individual or Organization seeking licensees for invention: WARF X U.S. Patent Application filed. Date: 11/13/74; S.N.: 523,322
X U.S. Patent granted. Date: 6/8/76; No.: 3.962.586
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title:; Date:
FIRST LICENSEE:; Date of license:
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SECOND LICENSEE: ; Date of license:
Potal license payments to grantee before Oct. 1, 1976: \$
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Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes X No
FOREIGN PATENT STATUS Country of filing Filing date Filing No. Date Granted Patent No.

NSF File Number: 78-22 Disclosure Date: 1/3/78 Waiver Date: Grantee Institution: Wisconsin Inventor(s): Mistretta Invention Title: Time Dependent Subtraction Imaging - Mask Mode Individual or Organization seeking licensees for invention: X U.S. Patent Application filed. Date: 11/15/78; S.N.: 960,830 (c-i-p of S. N. 906, 686 - abandoned 6/15/79) X U.S. Patent granted. Date: 5/20/80; No.: 4,204,225 Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication? If so: Journal title: : Date: FIRST LICENSEE: N. V. Philips Gloeilampen- ; Date of license: 1/1/79 . fabrienken, Netherlands Total license payments to grantee before Oct. 1, 1976: \$ Payments from Oct. 1, 1976 to Sep. 30, 1977: \$: Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$10,000 Has the invention been put into commercial use under this license? _no If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description: ; Date of license: SECOND LICENSEE: Total license payments to grantee before Oct. 1, 1976: \$ Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$ _____ Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: ; Description: Please provide above information for further licenses on the back, and check here: . Is invention available to other licensees? Are you still actively seeking licensees? Yes Above License is exclusive for 3 years from date of 1st commercial sale or 8 years FOREIGN PATENT STATUS from date of License. Country of filing Filing date Filing No. Date Granted Patent No. Canada 5/16/79 327771 5/15/79 Holland 79. 03807 Japan 5/16/79. 60249/79 5/11/79 7916534 Great Britain 5/15/79 P29194250 W. Germany

5/15/79

France

7913277

NSF File Number: 78-29 Disclosure Date: 1/3/78 Waiver Date:
Grantee Institution: Wisconsin Inventor(s): Mistretta-Kruger-Houk
Invention Title: Time Interval Differencing Without Contrast Agent
Individual or Organization seeking licensees for invention:
X U.S. Patent Application filed. Date: 5/16/78 ; S.N.: 906.631
X U.S. Patent granted. Date: <u>5/20/80</u> ; No.: <u>4,204,226</u> .
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title:; Date:
FIRST LICENSEE: (See NSF File Number 78-22; Date of license: licensed to N. V. Philips under same Agreement) Total license payments to grantee before Oct. 1, 1976; \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$.
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SECOND LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$.
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Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes Above License is exclusive for 3 years from date of 1st commercial sale or 8 years FOREIGN PATENT STATUS from date of License. Country of filing Filing date Filing No. Date Granted Patent No. Canada 5/16/79 327772

OMB NO. 99-R0308 APPROVAL EXPIRES: April 30, 1981 Same as 1979

STATUS OF NSF-FUNDED INVENTION

NSF File Number: 79-50 Disclosure Date: 2/19/79 Waiver Date:

Grantee Institution: Wisconsin Inventor(s): Mistretta-Kruger-Riederer
Invention Title: Digital Fluoroscopic Three-Beam K-Edge Imaging of Iodine on a Point by Point Basis Using Differences Individual or Organization seeking licensees for invention:
The state of the warren warren and the state of the state
U.S. Patent Application filed. Date:; S.N.:
No patent application has been filed to date. U.S. Patent granted. Date: No.:
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title:; Date:
FIRST LICENSEE:; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$.
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SECOND LICENSEE: ; Date of license:
Potal license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
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Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes No .
FOREIGN PATENT STATUS

Country of filing Filing date Filing No. Date Granted Patent No.

STATUS OF NSF-FUNDED INVENTION April 30, 1981

NSF File Number: 79-70 Disclosure Date: 3/26/79 Waiver Date:
Grantee Institution: Wisconsin Inventor(s): Rasmussen-Loper-Perepezko
Invention Title: Emulsification of Metals in Glass and Molten Salts
Individual or Organization seeking licensees for invention:
PART CONTROL WARF
U.S. Patent Application filed. Date: ; S.N.: Application ready for filing - awaiting signature of all inventors. U.S. Patent granted. Date: ; No.:
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication? .
If so: Journal title:; Date:
FIRST LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description:
SECOND LICENSEE: ; Date of license:
Potal license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description:
Please provide above information for further licenses on the back, and check here: Are you still actively seeking licensees? Yes x No .
FOREIGN PATENT STATUS Country of filing Filing date Filing No. Date Granted Patent No.
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STATUS OF NSF-FUNDED INVENTION April 30, 1981

NSF File Number: 79-69 \ Disclosure Date: 3/26/79 Waiver Date:
Grantee Institution: Wisconsin Inventor(s): Rasmussen-Loper-Perepezko
Invention Title: Control of Solidification Microstructure by the Use of Emulsified Metal Droplets Individual or Organization seeking licensees for invention:
WARF
U.S. Patent Application filed. Date: ; S.N.: Application drafted; awaiting more data from inventors. U.S. Patent granted. Date: ; No.:
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title:; Date:
FIRST LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description:
SECOND LICENSEE: ; Date of license: .
Potal license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description:
Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes x No .
FOREIGN PATENT STATUS Country of filing Filing date Filing No. Date Granted Patent No.

NSF File Number: 79-71 Disclosure Date: 3/26/79 Waiver Date:
Grantee Institution: Wisconsin Inventor(s): Rasmussen-Loper-Perepezko-Anderson
Invention Title: Use of Emulsified Metal Droplets as Seeds for the Production
of Nonequilibrium Phases Individual or Organization seeking licensees for invention:
WARF
U.S. Patent Application filed. Date: ; S.N.:
No application has been filed to date; awaiting more data from inventors. U.S. Patent granted. Date: ; No.:
Status of patent application if not yet granted:
If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title: ; Date:
FIRST LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Bescription:
SECOND LICENSEE: ; Date of license: .
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description:
Please provide above information for further licenses on the back, and check here: . Is invention available to other licensees?
Are you still actively seeking licensees? Yes X No .
FOREIGN PATENT STATUS Country of filing Filing date Filing No. Date Granted Patent No.
comery of titting titting date. Litting two back drawing tweens to

NSF File Number: Disclosure Date: 1/10/80 Waiver Date:
Grantee Institution: Wisconsin Inventor(s): Ray-Schork .
Invention Title: Tensiometer for Surface Tension Measurements of Liquids Under Static for Flow Conditions Individual or Organization seeking licensees for invention:
WARF
U.S. Patent Application filed. Date: ; S.N.: Advised NSF on 1/10/80 that patent application would not be filed.
U.S. Patent granted. Date: ; No.:
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has
the invention been disclosed in a publication?
If so: Journal title: ; Date:
FIRST LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date:; Description:
SECOND LICENSEE:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Conscription:
Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes No .
FOREIGN PATENT STATUS Country of filing Filing date Filing No. Date Granted Patent No.

Nor File Number: 70-05 Disclosure Date: 0/4//8 Walver Date:
Grantee Institution: Wisconsin Inventor(s): Scott
Invention Title: Fluxon Oscillators
Individual or Organization seeking licensees for invention: WARF WARF WU.S. Patent Application filed. Date: 7/12/78; S.N.: 923,955
X U.S. Patent granted. Date: 1/1/80; No.: 4,181,902
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title: ; Date:
FIRST LICENSEE:; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description: SECOND LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Total Titense payments to grantee before occ. 1, 1970. Y
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description:
Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes x No .
FOREIGN PATENT STATUS Country of filing Filing date Filing No. Date Granted Patent No.

OMB NO. 99-R0308 APPROVAL EXPIRES: April 30, 1981

STATUS OF NSF-FUNDED INVENTION

STATOS OF MSE-EUKDED THARMTTON

NSF File Number: 75-99 Disclosure Date: 2/13/75 Waiver Date:
Grantee Institution: Wisconsin Inventor(s): Skoog-Schmitz-Hecht-Frye
Invention Title: Cytokinin Antagonists and Method of Production and Use
Individual or Organization seeking licensees for invention: WARF WARF U.S. Patent Application filed. Date: $4/24/74$; S.N.: $463,739$
X U.S. Patent granted. Date: 10/26/76 No.: 3,988,338
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title:; Date:
FIRST LICENSEE: Burroughs-Wellcome ; Date of license: 4/1/76 . License terminated 4/1/79 Total license payments to grantee before Oct. 1, 1976: \$1,000 .
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$ Has the invention been put into commercial use under this license? no The second state and describe bringly is not describe any intended.
If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date:; Description:
SECOND LICENSEE:; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$.
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description:
Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes x No
FOREIGN PATENT STATUS Country of filing Filing date Filing No. Date Granted Patent No.

STATUS OF NSF-FUNDED INVENTION April 30, 1981

NSF File Number: /9-08 Disclosure Date: 3/26/79 Waiver Date:
Grantee Institution: Wisconsin Inventor(s): Smith-Perepezko-Rasmusseh-Loper
Invention Title: The Compaction of Amorphous Droplets Produced by
Emulsification Individual or Organization seeking licensees for invention:
The state of the s
X U.S. Patent Application filed. Date: 11/13/78; S.N.: 960,100
U.S. Patent granted. Date: ; No.:
Status of patent application if not yet granted: In condition for allowance. If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title: ; Date:
FIRST LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description:
SECOND LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$.
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description:
Please provide above information for further licenses on the back, and check here: Is invention available to other licensees?
Are you still actively seeking licensees? Yes x No .
Foreign patent status
Country of filing Filing date Filing No. Date Granted Patent No.

OMB NO. 99-R0308 APPROVAL EXPIRES: April 30, 1981

STATUS OF NSF-FUNDED INVENTION

Same as 1979

NSF File Number: 75-121 Disclosure Date: 3/18/75 Waiver Date: Grantee Institution: Wisconsin Inventor(s): Trost-Tamaru Invention Title: Oxidative Decarboxylation of Carboxylic Acids Individual or Organization seeking licensees for invention: X U.S. Patent Application filed. Date: 5/19/75 : S.N.: 578,533 X U.S. Patent granted. Date: 2/8/77; No.: 4.007.211 Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication? If so: Journal title: Total license payments to grantee before Oct. 1, 1976: \$_____ ; Oct. 1, 1977 Payments from Oct. 1; 1976 to Sep. 30, 1977: \$; Oct. 1, 197 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$ Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description: ; Date of license: ____. SECOND LICENSEE: Total license payments to grantee before Oct. 1, 1976: \$ Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$; Oct. 1,1977 Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description: Please provide above information for further licenses on the back, and check here: . Is invention available to other licensees? Are you still actively seeking licensees? Yes x FOREIGN PATENT STATUS Country of filing Filing date Filing No. Date Granted Patent No.

OMB NO. 99-R0308 APPROVAL EXPIRES: April 30, 1981

Same as 1979
NSF File Number: 76-92 Disclosure Date: 2/6/76 Waiver Date:
Grantee Institution: Wisconsin Inventor(s): Trost-Verhoeven
Invention Title: Catalytic Allylic Alkylation
Individual or Organization seeking licensees for invention:
WARF X U.S. Patent Application filed. Date: 1/5/76; S.N.: 646,640.
X U.S. Patent granted. Date: 9/27/77; No.: 4.051,157
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title:; Date:
FIRST LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description: SECOND LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description:
Please provide above information for further licenses on the back, and check here: Are you still actively seeking licensees? Yes x No
FOREIGN PATENT STATUS Country of Filing Patent No. Pat

STATUS OF NSF-FUNDED INVENTION April 30, 1981

NSF File Number: Disclosure Date: 6/23/80 Waiver Date: 80-75-CHE-76-15113
Grantee Institution: Wisconsin Inventor(s): Trost-Vincent .
Invention Title: Ring Expansion and Chain Extension Process and Reagents
Individual or Organization seeking licensees for invention:
The state of the warrant warrant and the state of the sta
U.S. Patent Application filed. Date: 7/3/80 ; S.N.: 165.768
U.S. Patent granted. Date: ; No.:
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has
the invention been disclosed in a publication?
If so: Journal title:; Date:
FIRST LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
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SECOND LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description:
Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes x No.
FOREIGN PATENT STATUS
Country of filing Filing date Filing No. Date Granted Patent No.

NSF File Number: 76-39 Disclosure Date: 9/30/75 Waiver Date:
Grantee Institution: Wisconsin Inventor(s): Walters
Invention Title: Mestastable Argon Stabilized Arc Device
Individual or Organization seeking licensees for invention:
WARF X U.S. Patent Application filed. Date: 9/17/75; S.N.: 614,194
X U.S. Patent granted. Date: 11/29/77; No.: 4,060,708
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title: ; Date:
FIRST LICENSEE:; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description: SECOND LICENSEE: Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
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Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes X NO
FOREIGN PATENT STATUS
Country of filing Filing date Filing No. Date Granted Patent No. Canada 9/16/76 261,337 5/6/80 1077125
Great Britain 9/10/76 37633/76 1/30/80 1556741
Japan 9/17/76 111657/76

NSF File Number: 74	-46 Disclos	sure Date: 2/5	/74 Waiver	Date:
Grantee Institution	- Wisconsin	·Invent	or(s): Walter	s-Bernier
Invention Title: Sp	oark Source wi	th Electronic (Switching Tub	es in
Individual or Organ	ization seekir	ng licensees f	or invention:	
WAR	EF			
X U.S. Patent Appli	ication filed.	. Date: <u>4/16</u>	<u>/75</u> ; S.N.:	568,577
X U.S. Patent grant	ed. Date: 8	/3/76 ; No.	· _3,973,167	
Status of patent app If U.S. patent has a the invention been of	een denied or	the applicat	ion has been .	abandoned, has
If so: Journal titl	e:		; Da	te:
FIRST LICENSEE:		; Da	ate of license	3:
Total license paymen	ts to grantee	before Oct.	1, 1976: \$	
Payments from Oct. 1 to Sep. 30, 1978: \$, 1976 to Sep	. 30, 1977: \$; Oct. 1, 1977 79: \$
Has the invention be If so, give date and commercial use (use) Description: SECOND LICENSEE:	describe bri	efly; if not, nded comments)	describe any	intended
Total license payment	cs to grancee	refore occ. 1	., 1970: 5	
Payments from Oct. 1 to Sep. 30, 1978: \$_	, 1976 to Sep.	. 30, 1977: \$. 1, 1978 to	Sep. 30, 1979	; Oct. 1,1977 5: \$
Has the invention bear If so, give date and commercial use (use b Description:	describe brie	efly; if not,	describe any	
Please provide above check here: . Is Are you still activel	s invention av	vailable to ot	her licensees	
		PATENT STATU		l Dahamb Na
Country of filing Brazil		Filing No.		
	2/20/75 2/21/75	1380/75 - ab 220, 578	0 /26 /79	1039346
W. Germany	2/8/75	P2505392.3	//40/70	1007040
~		7155175	271/78	1487816
Japan		21400/75		
Canada (Div.)	2/20/78	297,261	1/2/79	1045675

OMB NO. 99-R0308 APPROVAL EXPIRES: April 30, 1981

STATUS OF NSF-FUNDED INVENTION

No change from 1979

NSF File Number: 76-132 Disclosure Date: 5/3/76 Waiver Date:
Grantee Institution: Wisconsin Inventor(s): Walters-Coleman
Invention Title: Spark Source with Regulation of Spark Magnitude by Control of Spark Timing Individual or Organization seeking licensees for invention:
WARF X U.S. Patent Application filed. Date: 3/1/76; S.N.: 662,891
X U.S. Patent granted. Date: 10/25/77; No.: 4,055,783 .
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title:; Date:
FIRST LICENSEE: ; Date of license: .
Total license payments to grantee before Oct. 1, 1976: \$ Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
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SECOND LICENSEE:; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description:
Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes x No •
FOREIGN PATENT STATUS Country of filing Filing date Filing No. Date Granted Patent No.
Canada 9/9/77 286.403

OMB NO. 99-R0308 APPROVAL EXPIRES:

STATUS OF NSF-FUNDED INVENTION

April 30, 1981 No change from 1979

NSF File Number: 76-122' Disclosure Date: 3/15/76 Waiver Date: Grantee Institution: Wisconsin Inventor(s): West-Beyer-Komatsu Invention Title: Quinocyclopropene Derivatives Individual or Organization seeking licensees for invention: X U.S. Patent Application filed. Date: 3/15/77 ; S.N.: 777.836 X U.S. Patent granted. Date: 1/9/79; No.: 4.133,821 Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication? If so: Journal title: ; Date: ; Date of license: FIRST LICENSEE: Total license payments to grantee before Oct. 1, 1976: \$ Payments from Oct. 1, 1976 to Sep. 30, 1977: \$___ ; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$ Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description: SECOND LICENSEE: ; Date of license: Total license payments to grantee before Oct. 1, 1976: \$ Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$ Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description: Please provide above information for further licenses on the back, and check here: . Is invention available to other licensees? Are you still actively seeking licensees? Yes X FOREIGN PATENT STATUS Country of filing Filing date Filing No. Date Granted Patent No.

NSF FILE NUMBER: 70-140 Disclosure Date: 3/25/76 Walver Date:
Grantee Institution: Wisconsin Inventor(s): J. C. Wright
Invention Title: Chemical Analysis of Ions Incorporated in Lattices Using Coherent Excitation Sources
Individual or Organization seeking licensees for invention:
WARF
X U.S. Patent Application filed. Date: 2/11/76; S.N.: 657,252
X U.S. Patent granted. Date: 2/8/77; No.: 4.007.009
Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication?
If so: Journal title:; Date:
FIRST LICENSEE: ; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
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SECOND LICENSEE:; Date of license:
Total license payments to grantee before Oct. 1, 1976: \$
Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1,1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$
Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Cescription:
Please provide above information for further licenses on the back, and check here: Is invention available to other licensees? Are you still actively seeking licensees? Yes X NO
FOREIGN PATENT STATUS
Country of filing Filing date Filing No. Date Granted Patent No. Canada 2/1/77 270,802 1/1/80 1068930
Canada $\frac{2}{1}/\frac{7}{7}$, $\frac{270,802}{1}$, $\frac{1}{1}/80$ $\frac{1068930}{1}$

NSF File Number: 80-45 Disclosure Date: 2/26/80 Waiver Date: Grantee Institution: Wisconsin Inventor(s): Zeikus & Ben-Bassat & Lamed & Ng Invention Title: Ethanol Production from Cellulosic Biomass by Co-cultures of Clostridium Thermocellum and a New Isolate Clostridium Thermohydrosulfuricum Individual or Organization seeking licensees for invention:

Strain 39E U.S. Patent Application filed. Date: Patent application in process of being drafted.

U.S. Patent granted. Date: ; No.: Status of patent application if not yet granted: If U.S. patent has been denied or the application has been abandoned, has the invention been disclosed in a publication? If so: Journal title: ; Date: ; Date of license: _____. FIRST LICENSEE: Total license payments to grantee before Oct. 1, 1976: \$ Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. 1, 1977 to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$. Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description: ; Date of license: _____ SECOND LICENSEE: Total license payments to grantee before Oct. 1, 1976: \$______ ; Oct. 1,1977 Payments from Oct. 1, 1976 to Sep. 30, 1977: \$; Oct. to Sep. 30, 1978: \$; Oct. 1, 1978 to Sep. 30, 1979: \$ Has the invention been put into commercial use under this license? If so, give date and describe briefly; if not, describe any intended commercial use (use back for extended comments). Date: Description: Please provide above information for further licenses on the back, and check here: . Is invention available to other licensees? Are you still actively seeking licensees? Yes x FOREIGN PATENT STATUS

Country of filing Filing date Filing No. Date Granted Patent No.