

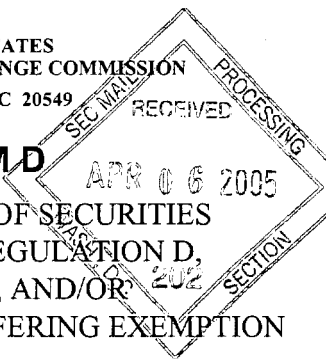
FORM D

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C 20549

OMB APPROVAL table with OMB Number: 3235-0076, Expires: May 31, 2005, Estimated average burden: 16.00 hours per response.

FORM D

NOTICE OF SALE OF SECURITIES PURSUANT TO REGULATION D, SECTION 4(6), AND/OR UNIFORM LIMITED OFFERING EXEMPTION



SEC USE ONLY table with Prefix, Serial, and DATE RECEIVED fields.

Name of Offering () check if this is an amendment and name has changed, and indicate change.)

Series B Preferred Stock Financing

Filing Under (Check box(es) that apply): () Rule 504 () Rule 505 (X) Rule 506 () Section 4(6) () ULOE

Type of Filing: (X) New Filing () Amendment

A. BASIC IDENTIFICATION DATA

1. Enter the information requested about the issuer

Name of Issuer () check if this is an amendment and name has changed, and indicate change.)

Applied MicroStructures, Inc.

Address of Executive Offices (Number and Street, City, State, Zip Code)

4425 Fortran Drive, San Jose, CA 95134

Telephone Number (Including Area Code)

(408) 594-0414

Address of Principal Business Operations (if different from Executive Offices) (Number and Street, City, State, Zip Code)

Same as above

Telephone Number (Including Area Code)

Brief Description of Business

Nanotechnology

Type of Business Organization

- (X) corporation () limited partnership, already formed () other (please specify) () business trust () limited partnership, to be formed

Actual or Estimated Date of Incorporation or Organization: Month 01 Year 03 (X) Actual () Estimated

Jurisdiction of Incorporation or Organization: (Enter two-letter U.S. Postal Service abbreviation for State; CN for Canada, FN for other foreign jurisdiction) DE

PROCESSED APR 08 2005 THOMSON FINANCIAL

GENERAL INSTRUCTIONS

Federal:

Who Must File: All issuers making an offering of securities in reliance on an exemption under Regulation D or Section 4(6), 17 CFR 230.501 et seq. or 15 U.S.C. 77d(6).

When To File: A notice must be filed no later than 15 days after the first sale of securities in the offering. A notice is deemed filed with the U.S. Securities and Exchange Commission (SEC) on the earlier of the date it is received by the SEC at the address given below or, if received at that address after the date on which it is due, on the date it was mailed by United States registered or certified mail to that address.

Where To File - U.S. Securities and Exchange Commission, 450 Fifth Street, N.W., Washington, D.C. 20549.

Copies Required: Five (5) copies of this notice must be filed with the SEC, one of which must be manually signed. Any copies not manually signed must be photocopies of the manually signed copy or bear typed or printed signatures.

Information Required: A new filing must contain all information requested. Amendments need only report the name of the issuer and offering, any changes thereto, the information requested in Part C, and any material changes from the information previously supplied in Parts A and B. Part E and the Appendix need not be filed with the SEC.

Filing Fee: There is no federal filing fee.

State:

This notice shall be used to indicate reliance on the Uniform Limited Offering Exemption (ULOE) for sales of securities in those states that have adopted ULOE and that have adopted this form. Issuers relying on ULOE must file a separate notice with the Securities Administrator in each state where sales are to be, or have been, made. If a state requires the payment of a fee as a precondition to the claim for the exemption, a fee in the proper amount shall accompany this form. This notice shall be filed in the appropriate states in accordance with state law. The Appendix to the notice constitutes a part of this notice and must be completed.

ATTENTION

Failure to file notice in the appropriate states will not result in a loss of the federal exemption. Conversely, failure to file the appropriate federal notice will not result in a loss of an available state exemption unless such exemption is predicated on the filing of a federal notice.

Handwritten signature/initials.

A. BASIC IDENTIFICATION DATA

2. Enter the information requested for the following:

- Each promoter of the issuer, if the issuer has been organized within the past five years;
- Each beneficial owner having the power to vote or dispose, or direct the vote or disposition of, 10% or more of a class of equity securities of the issuer.
- Each executive officer and director of corporate issuers and of corporate general and managing partners of partnership issuers;
- Each general and managing partner of partnership issuers.

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Chinn, Jeffrey D.

Business or Residence Address (Number and Street, City, State, Zip Code)

4425 Fortran Drive, San Jose, CA 95134

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Compass Venture Partners II, L.P.

Business or Residence Address (Number and Street, City, State, Zip Code)

1550 El Camino Real, Suite 275, Menlo Park, CA 94025

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Harrus, Alain

Business or Residence Address (Number and Street, City, State, Zip Code)

1550 El Camino Real, Suite 275, Menlo Park, CA 94025

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Horizon Ventures Fund II, L.P.

Business or Residence Address (Number and Street, City, State, Zip Code)

Four Main Street, Los Altos, CA 94022

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

LAM Research Corporation

Business or Residence Address (Number and Street, City, State, Zip Code)

4400 Cushing Parkway, Fremont, CA 94538

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Nguyen, Binh T.

Business or Residence Address (Number and Street, City, State, Zip Code)

1550 El Camino Real, Suite 275, Menlo Park, CA 94025

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Nowak, Romuald (Romek)

Business or Residence Address (Number and Street, City, State, Zip Code)

1550 El Camino Real, Suite 275, Menlo Park, CA 94025

(Use blank sheet, or copy and use additional copies of this sheet, as necessary)

A. BASIC IDENTIFICATION DATA

2. Enter the information requested for the following:

- Each promoter of the issuer, if the issuer has been organized within the past five years;
- Each beneficial owner having the power to vote or dispose, or direct the vote or disposition of, 10% or more of a class of equity securities of the issuer.
- Each executive officer and director of corporate issuers and of corporate general and managing partners of partnership issuers;
- Each general and managing partner of partnership issuers.

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Sierra Ventures VIII-A, L.P.

Business or Residence Address (Number and Street, City, State, Zip Code)

2884 Sand Hill Road, Suite 100, Menlo Park, CA 94025

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Sierra Ventures VII, L.P.

Business or Residence Address (Number and Street, City, State, Zip Code)

2884 Sand Hill Road, Suite 100, Menlo Park, CA 94025

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (East name first, if individual)

Tsui, Doug

Business or Residence Address (Number and Street, City, State, Zip Code)

4425 Fortran Drive, San Jose, CA 95134

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Yi, Richard

Business or Residence Address (Number and Street, City, State, Zip Code)

4425 Fortran Drive, San Jose, CA 95134

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (East name first, if individual)

Yu, Ben

Business or Residence Address (Number and Street, City, State, Zip Code)

4425 Fortran Drive, San Jose, CA 95134

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Business or Residence Address (Number and Street, City, State, Zip Code)

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Business or Residence Address (Number and Street, City, State, Zip Code)

(Use blank sheet, or copy and use additional copies of this sheet, as necessary)

B. INFORMATION ABOUT OFFERING

1. Has the issuer sold, or does the issuer intend to sell, to non-accredited investors this offering? Yes No
 Answer also in Appendix, Column 2, if filing under ULOE.
2. What is the minimum investment that will be accepted from any individual? \$ _____
3. Does the offering permit joint ownership of a single unit? Yes No
4. Enter the information requested for each person who has been or will be paid or given, directly or indirectly, any commission or similar remuneration for solicitation of purchasers in connection with sales of securities in the offering. If a person to be listed is an associated person or agent of a broker or dealer registered with the SEC and/or with a state or states, list the name of the broker or dealer. If more than five (5) persons to be listed are associated persons of such a broker or dealer, you may set forth the information for that broker or dealer only.

Full Name (Last name first, if individual)

Business or Residence Address (Number and Street, City, State, Zip Code)

Name of Associated Broker or Dealer

States in Which Person Listed Has Solicited or Intends to Solicit Purchasers

(Check "All States" or check individual States) All States

AL	AK	AZ	AR	CA	CO	CT	DE	DC	FL	GA	HI	ID
IL	IN	IA	KS	KY	LA	ME	MD	MA	MI	MN	MS	MO
MT	NE	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA
RI	SC	SD	TN	TX	UT	VT	VA	WA	WV	WI	WY	PR

Full Name (Last name first, if individual)

Business or Residence Address (Number and Street, City, State, Zip Code)

Name of Associated Broker or Dealer

States in Which Person Listed Has Solicited or Intends to Solicit Purchasers

(Check "All States" or check individual States) All States

AL	AK	AZ	AR	CA	CO	CT	DE	DC	FL	GA	HI	ID
IL	IN	IA	KS	KY	LA	ME	MD	MA	MI	MN	MS	MO
MT	NE	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA
RI	SC	SD	TN	TX	UT	VT	VA	WA	WV	WI	WY	PR

Full Name (Last name first, if individual)

Business or Residence Address (Number and Street, City, State, Zip Code)

Name of Associated Broker or Dealer

States in Which Person Listed Has Solicited or Intends to Solicit Purchasers

(Check "All States" or check individual States) All States

AL	AK	AZ	AR	CA	CO	CT	DE	DC	FL	GA	HI	ID
IL	IN	IA	KS	KY	LA	ME	MD	MA	MI	MN	MS	MO
MT	NE	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA
RI	SC	SD	TN	TX	UT	VT	VA	WA	WV	WI	WY	PR

(Use blank sheet, or copy and use additional copies of this sheet, as necessary.)

C. OFFERING PRICE, NUMBER OF INVESTORS, EXPENSES AND USE OF PROCEEDS

1. Enter the aggregate offering price of securities included in this offering and the total amount already sold. Enter "0" if answer is "none" or "zero." If the transaction is an exchange offering, check this box and indicate in the columns below the amounts of the securities offered for exchange and already exchanged.

Type of Security	Aggregate Offering Price	Amount Already Sold
Debt	\$ _____	\$ _____
Equity	\$ 8,500,000.00	\$ 8,500,000.00
	<input type="checkbox"/> Common <input checked="" type="checkbox"/> Preferred	
Convertible Securities (including warrants)	\$ _____	\$ _____
Partnership Interests	\$ _____	\$ _____
Other (Specify _____)	\$ _____	\$ _____
Total	\$ 8,500,000.00	\$ 8,500,000.00

Answer also in Appendix, Column 3, if filing under ULOE.

2. Enter the number of accredited and non-accredited investors who have purchased securities in this offering and the aggregate dollar amounts of their purchases. For offerings under Rule 504, indicate the number of persons who have purchased securities and the aggregate dollar amount of their purchases on the total lines. Enter "0" if answer is "none" or "zero."

	Number Investors	Aggregate Dollar Amount of Purchases
Accredited Investors	11	\$ 8,500,000.00
Non-accredited Investors	_____	\$ _____
Total (for filings under Rule 504 only)	_____	\$ _____

Answer also in Appendix, Column 4, if filing under ULOE.

3. If this filing is for an offering under Rule 504 or 505, enter the information requested for all securities sold by the issuer, to date, in offerings of the types indicated, in the twelve (12) months prior to the first sale of securities in this offering. Classify securities by type listed in Part C — Question 1.

Type of offering	Type of Security	Dollar Amount Sold
Rule 505	_____	\$ _____
Regulation A	_____	\$ _____
Rule 504	_____	\$ _____
Total	_____	\$ _____

4. a. Furnish a statement of all expenses in connection with the issuance and distribution of the securities in this offering. Exclude amounts relating solely to organization expenses of the issuer. The information may be given as subject to future contingencies. If the amount of an expenditure is not known, furnish an estimate and check the box to the left of the estimate.

Transfer Agent's Fees	<input type="checkbox"/>	\$ _____
Printing and Engraving Costs	<input type="checkbox"/>	\$ _____
Legal Fees	<input checked="" type="checkbox"/>	\$ 35,000.00
Accounting Fees	<input type="checkbox"/>	\$ _____
Engineering Fees	<input type="checkbox"/>	\$ _____
Sales Commissions (specify finders' fees separately)	<input type="checkbox"/>	\$ _____
Other Expenses (identify) <u>Form D Filing Fee</u>	<input checked="" type="checkbox"/>	\$ 300.00
Total	<input checked="" type="checkbox"/>	\$ 35,300.00


b. Enter the difference between the aggregate offering price given in response to Part C — Question 1 and total expenses furnished in response to Part C — Question 4.a. This difference is the "adjusted gross proceeds to the issuer."

\$ 8,464,700.00

5. Indicate below the amount of the adjusted gross proceeds to the issuer used or proposed to be used for each of the purposes shown. If the amount for any purpose is not known, furnish an estimate and check the box to the left of the estimate. The total of the payments listed must equal the adjusted gross proceeds to the issuer set forth in response to Part C - Question 4.b above.

	Payments to Officers, Directors, & Affiliates	Payments To Others
Salaries and fees	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Purchase of real estate	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Purchase, rental or leasing and installation of machinery and equipment	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Construction or leasing of plant buildings and facilities	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Acquisition of other businesses (including the value of securities involved in this offering that may be used in exchange for the assets or securities of another issuer pursuant to a merger)	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Repayment of indebtedness	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Working capital	<input type="checkbox"/> \$ _____	<input checked="" type="checkbox"/> \$ 8,464,700.00
Other (specify): _____	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
_____	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
_____	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Column Totals	<input type="checkbox"/> \$ _____	<input checked="" type="checkbox"/> \$ 8,464,700.00
Total Payments Listed (column totals added)		<input checked="" type="checkbox"/> \$ 8,464,700.00

The issuer has duly caused this notice to be signed by the undersigned duly authorized person. If this notice is filed under Rule 505, the following signature constitutes an undertaking by the issuer to furnish to the U.S. Securities and Exchange Commission, upon written request of its staff, the information furnished by the issuer to any non-accredited investor pursuant to paragraph (b)(2) of Rule 502.

Issuer (Print or Type) Applied MicroStructures, Inc.	Signature 	Date April 4, 2005
Name of Signer (Print or Type) Jeffrey D. Chinn	Title of Signer (Print or Type) President and Chief Executive Officer	

ATTENTION

Intentional misstatements or omissions of fact constitute federal criminal violations. (See 18 U.S.C. 1001.)