

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

OMB APPROVAL  
OMB Number: 3235-0076  
Expires: December 31, 2008  
Estimated average burden  
hours per response..... 16.00

ORIGINAL

FORM D

PROCESSED

JAN 07 2009

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

THOMSON REUTERS

SEC USE ONLY	
Profile	Serial
DATE RECEIVED	

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

Series D Preferred Stock; Common Stock issuable upon conversion thereof

SEC Mail Processing  
Section

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

Type of Filing:  New Filing  Amendment

A. BASIC IDENTIFICATION DATA

DEC 23 2008

I. Enter the information requested about the issuer

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

Washington, DC  
444

Intermolecular, Inc.

Address of Executive Offices (Number and Street, City, State, Zip Code)  
2865 Zanker Road, San Jose, CA 95134

Telephone Number (Including Area Code)  
(408) 282-3571

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

Telephone Number (In-  
Same

Brief Description of Business



08070776

Commercializing nanotechnology solutions

Type of Business Organization

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

Actual or Estimated Date of Incorporation or Organization: Month Year  
0 6 0 4  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

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.

**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; and
- 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)

**Baruch, Thomas R.**

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

**c/o CMEA Ventures, One Embarcadero Center, Suite 3250, San Francisco, CA 94111**

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

Full Name (Last name first, if individual)

**Chiang, Tony**

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

**Intermolecular, Inc., 2865 Zanker Road, 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)

**CMEA Ventures VI, L.P. and related entity**

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

**One Embarcadero Center, Suite 3250, San Francisco, CA 94111**

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

Full Name (Last name first, if individual)

**Eidelman, Peter L.**

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

**Intermolecular, Inc., 2865 Zanker Road, 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)

**Federman, Irwin**

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

**c/o U.S. Venture Partners, 2735 Sand Hill Road, 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)

**Fiordalice, Robert W.**

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

**Intermolecular, Inc., 2865 Zanker Road, 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)

**Goldwasser, Isy**

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

**c/o Symyx Technologies, Inc., 2163 East Arques Avenue, Sunnyvale, CA 94085**

(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; and
- 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)

Lazovsky, David E.

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

Intermolecular, Inc., 2865 Zanker Road, 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)

McWilliams, Bruce M.

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

c/o Tessera Technologies, Inc., 3099 Orchard Drive, San Jose, CA 94134-2005

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

Full Name (Last name first, if individual)

Minlhane, Derek

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

Intermolecular, Inc., 2865 Zanker Road, 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)

Prabhakar, Ravi

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

Intermolecular, Inc., 2865 Zanker Road, 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)

Redpoint Ventures II, L.P. and related entity

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

3000 Sand Hill Road, Building Two, Suite 290, 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)

Scalise, George M.

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

c/o Intermolecular, Inc., 2865 Zanker Road, 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)

Symyx Technologies, Inc.

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

2163 East Arques Avenue, Sunnyvale, CA 94085

(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; and
- 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)

U.S. Venture Partners IX, L.P.

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

2735 Sand Hill Road, 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)

Walecka, John L.

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

c/o Redpoint Ventures, 3000 Sand Hill Road, Building Two, Suite 290, 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)

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)

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

Full Name (Last name first, if individual)

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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 in 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? ..... \$3.04144  
 Yes  No
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)  
 N/A

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)  
 N/A

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)  
 N/A

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. (A small percentage of the Series C Preferred Stock issued was pursuant to an exchange transaction)

Type of Security	Aggregate Offering Price	Amount Already Sold
Debt .....	\$0.00	\$0.00
Equity (includes shares issued upon conversion of notes previously issued) <input type="checkbox"/> Common <input checked="" type="checkbox"/> Preferred	\$30,000,000.76	\$19,999,998.48
Convertible Securities (including warrants) .....	\$0.00	\$0.00
Partnership Interests .....	\$0.00	\$0.00
Other (Specify _____) .....	\$0.00	\$0.00
<b>Total</b> .....	<b>\$30,000,000.76</b>	<b>\$19,999,998.48</b>

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 .....	<u>7</u>	<u>\$19,999,998.48</u>
Non-accredited Investors .....	<u>0</u>	<u>\$0.00</u>
<b>Total (for filings under Rule 504 only)</b> .....	_____	_____

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 .....	_____	_____
<b>Total</b> .....	_____	_____

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"/>	\$0.00
Printing and Engraving Costs .....	<input type="checkbox"/>	\$0.00
Legal Fees .....	<input checked="" type="checkbox"/>	\$75,000.00
Accounting Fees .....	<input type="checkbox"/>	\$0.00
Engineering Fees .....	<input type="checkbox"/>	\$0.00
Sales Commissions (specify finders' fees separately) .....	<input type="checkbox"/>	\$0.00
Other Expenses (identify) (Blue Sky Filing Fees) .....	<input type="checkbox"/>	\$450.00
<b>Total</b> .....	<input checked="" type="checkbox"/>	<b>\$75,450.00</b>

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

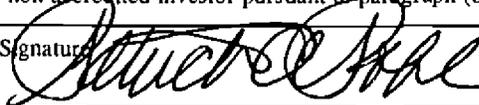
b. Enter the difference between the aggregate offering price given in response to Part C - Question 1 and total expenses furnished in response to Part C - Question 4.a. This difference is the "adjusted gross proceeds to the issuer." \$29,924,550.76

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"/> \$0.00	<input type="checkbox"/> \$0.00
Purchase of real estate .....	<input type="checkbox"/> \$0.00	<input type="checkbox"/> \$0.00
Purchase, rental or leasing and installation of machinery and equipment .....	<input type="checkbox"/> \$0.00	<input type="checkbox"/> \$0.00
Construction or leasing of plant buildings and facilities .....	<input type="checkbox"/> \$0.00	<input type="checkbox"/> \$0.00
Acquisition of other business (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"/> \$0.00	<input type="checkbox"/> \$0.00
Repayment of indebtedness .....	<input type="checkbox"/> \$0.00	<input type="checkbox"/> \$0.00
Working capital .....	<input type="checkbox"/> \$0.00	<input checked="" type="checkbox"/> \$29,924,550.76
Other (specify): _____ _____	<input type="checkbox"/> \$0.00	<input type="checkbox"/> \$0.00
Column Totals.....	<input type="checkbox"/> \$0.00	<input checked="" type="checkbox"/> \$29,924,550.76
Total Payments Listed (column totals added) .....	<input checked="" type="checkbox"/> \$29,924,550.76	

**D. FEDERAL SIGNATURE**

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) <b>Intermolecular, Inc.</b>	Signature 	Date December 19, 2008
Name of Signer (Print or Type) <b>Patrick A. Pohlen</b>	Title of Signer (Print or Type) <b>Secretary</b>	

**ATTENTION**

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