Crawford Bruce A
Form 4
April 27, 2011

FORM 4

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

OMB APPROVAL

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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. *See* Instruction 1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person *
Crawford Bruce A

(Last) (First) (Middle)

C/O NANOMETRICS, INC., 1550 BUCKEYE DRIVE

(Street)

MILPITAS, CA 95035

(City) (State) (Zip)

2. Issuer Name **and** Ticker or Trading Symbol
NANOMETRICS INC [NANO]

3. Date of Earliest Transaction (Month/Day/Year)
04/25/2011

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

_____ Director _____ 10% Owner
__X__ Officer (give title below) _____ Other (specify below)
Chief Operating Officer

6. Individual or Joint/Group Filing(Check Applicable Line)
_X_ Form filed by One Reporting Person
___ Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1.Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	04/25/2011		M		1,389	A	$ 0.98	41,954	D	
Common Stock	04/25/2011		M		229	A	$ 7.5	42,183	D	
Common Stock	04/25/2011		S		1,618 (1)	D	$ 15.92	40,565	D	
Common Stock	04/26/2011		M		556	A	$ 1.17	41,121	D	
Common Stock	04/26/2011		S		556 (1)	D	$ 16.59	40,565	D	

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned
(*e.g.*, puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount Underlying Securitie (Instr. 3 and 4)	
				Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amou or Numb of Shares
Non-Qualified Stock Option (right to buy)	$ 0.98	04/25/2011		M			1,389	(2)	11/19/2015	Common Stock	1,38
Non-Qualified Stock Option (right to buy)	$ 7.5	04/25/2011		M			229	(3)	09/03/2016	Common Stock	229
Non-Qualified Stock Option (right to buy)	$ 1.17	04/26/2011		M			556	(4)	02/25/2016	Common Stock	556

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Crawford Bruce A C/O NANOMETRICS, INC. 1550 BUCKEYE DRIVE MILPITAS, CA 95035			Chief Operating Officer	

Signatures

/s/ Ronald W. Kisling, Attorney-in-Fact	04/27/2011
**Signature of Reporting Person	Date

Explanation of Responses:

***** If the form is filed by more than one reporting person, *see* Instruction 4(b)(v).

****** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

(1) The sales reported in this Form 4 were effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on August 30, 2010, and amended on September 10, 2010.

(2) One thirty-sixth (1/36th) of the shares shall vest and become exercisable in equal monthly installments starting on the monthly anniversary of the date of grant (November 19, 2008).

(3) One third (1/3rd) of the shares are fully vested on the date of grant, with the remaining shares vesting (starting on the one year anniversary of the date of grant) at a rate of one twenty-fourth (1/24th) per month until fully vested on September 3, 2012.

(4) One thirty-sixth (1/36th) of the shares shall vest and become exercisable in equal monthly installments starting on the monthly anniversary of the date of grant (February 25, 2009).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure.
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