

The University of Akron
DISCLOSURE OF INVENTION FORM

(UARF07 6/02)

Date: 4/3/2003

Disclosure No.: _____
(University to provide)

1. Name and mailing address of individual submitting Disclosure.
Scott Collins
2094 Tricaso Drive, North Canton, OH 44325
2. Official title or position of submitter.
Professor of Polymer Science and Chemistry
3. Business telephone number of submitter.
330-972-7259
4. Title or brief description of the invention.
Polymerization of i-butene in hydrocarbon media using bis(borane) co-initiators
5. Grant Award or Contract Number under which the work was done leading to the invention.
n/a
6. Specify if the invention resulted from:
(a) ☒ University-supported effort.
(b) ☒ Independent effort.
(c) ☐ Outside activity/consulting agreement work.
7. Name and address of the facility within the University at which the invention was made.
Department of Polymer Science, University of Akron
8. If 6(b) and/or 6(c) above were checked, state the name and address of the facility at which the invention was made.
a) Dept. of Chemistry, U. Calgary, Calgary, Alberta b) Dept. of Chemistry, U. Waterloo, Waterloo, Ontario, Canada
9. If 6(c) above was checked, provide pertinent *Outside Activity Report* form.
10. If 6(c) above was checked, provide a copy of the *Consulting Agreement* applicable to such invention as disclosed.
11. Contributions.
(a) Full name (including full middle name), home address, and citizenship of those who contributed to the initial concept.

Name <u>Scott Collins</u>	Citizen of <u>USA/Canada</u>
Address <u>2094 Tricaso Dr., North Canton, OH 44325</u>	
Name <u>Warren E. Piers</u>	Citizen of <u>Canada</u>
Address <u>7932 71st Ave. NW, Calgary, Alberta, Canada T3B 4J3</u>	
Name _____	Citizen of _____
Address _____	

- (b) Full name (including full middle name), home address, and citizenship of those who contributed to subsequent development and testing.

Name Stewart P. Lewis Citizen of USA

Address 3175 Dresden R.D., Zanesville, OH 43701

Name _____ Citizen of _____

Address _____

Name _____ Citizen of _____

Address _____

12. Conception of discovery or invention.

- (a) What was the problem and how did you attack it? Preparation of high MW poly(i-butene) and butyl rubber in the absence of halogenated hydrocarbons at acceptable rates is not possible using conventional initiators. Tested bis(borane) co-initiator which is effective for protic initiation of i-butene polymerization in hydrocarbon solution.

- (b) First oral disclosure:

Date 2/3/2003 To whom Prof. Joseph Kennedy

- (c) First drawings:

Date _____ Dwg. numbers n/a

** attach two copies of the drawings to this form*

- (d) First written description:

Date 1/5/2003 Shown to or read by whom Peggy Kraft

** attach two copies of the written description to this form*

13. Development of invention.

- (a) Date work on development begun: 6/28/2001

- (b) Date completed: 4/4/2003

- (c) By whom made? Stewart P. Lewis

- (d) Experimental model ☒ Prototype ☐

14. First successful test or operation.

- (a) Date of first successful test or operation: 7/3/2002

- (b) By whom was the test conducted? Stewart P. Lewis

- (c) Where are the records of the test? GDYR-510

- (d) Who witnessed the records of the test? Scott Collins

15. First disclosure OUTSIDE the University.

- (a) Was the discovery disclosed to anyone outside the University or published in any manner?

Yes ☒ No ☐

- (b) Dates: 2/15/2003

- (c) To whom made? Warren Piers

(d) Where was the disclosure made? (provide details)

Verbally by phone

16. First commercial use or sale.

(a) Was the invention used, given, or advertised for sale or sold to anyone outside the University?

Yes ☐

No ☒

(b) Dates

(c) Provide details of the use, sale, or offer for sale

17. Description of discovery.

It is essential to include:

(a) background information on the purpose of the discovery (*i.e.*, the problem to be solved); and

(b) a detailed description of the discovery or invention (*i.e.*, the solution to the problem) with drawings where possible; and

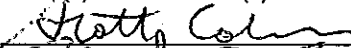


(c) a discussion of the advantages of the discovery or invention over what was done before.

Be certain to describe the best way of practicing the discovery or invention, and the alternatives to the best way without losing the advantages of the discovery or invention.

18. Most closely related prior publications, prior patents, and prior products or uses.

1. Baird et al. PCT Int. Appl. WO 0004061 (2000). 2. Langstein et al. Ger. Offen. DE 19836663 (2000). 3. Langstein et al. Eur. Pat. Appl. EP 787748 (1997). 4. Shaffer et al. PCT Int. Appl. WO 9529940 (1995). 5. M. C. Baird, US Patent 5,448,001 (1995). 6. Williams et al. Organometallics, 2000, 19, 1619. 7. Williams et al. Angew. Chem., 1999, 38, 3695. 8. Williams et al. J. Am. Chem. Soc. 1999, 121, 3244

19. Signature(s) of contributor(s).

(1)		Date	4/7/2003
X (2)		Date	4/7/2003
(3)		Date	4/7/2003
(4)		Date	
(5)		Date	
(6)		Date	

The foregoing Invention Disclosure consisting of ☒ pages (attached) plus attachments was read and understood by me on the date opposite my name.

Witness(es): include Dean and/or Chair.

(1)		Date	
(2)		Date	

20. Please indicate if your invention falls under any or the following categories:

- ☐ 01 Agricultural chemical (fertilizers, pesticides)
- ☐ 02 Computers, data transmission, communications
- ☐ 03 Drugs (human and animal medicinal products)
- ☐ 04 Electrical and electronic equipment (transmission, industrial apparatus; household appliances; security, safety and warning alarms; video and sound reproduction)
- ☐ 05 Energy (generation, distribution, and controls)
- ☐ 06 Food products and processing
- ☐ 07 Industrial inorganic chemical products and processing
- ☒ 08 Industrial organic chemical products and processing (synthetic, coal, bio- and petrochemicals)
- ☐ 09 Instruments, devices, controls, and systems
- ☐ 10 Mechanical machinery and equipment (construction, manufacturing, air conditioning, heat exchangers, vending machines, tools)
- ☐ 11 Medical, surgical, dental instruments (devices and supplies)
- ☐ 12 Metals (smelting, refining, steelmaking, processing)
- ☐ 13 Mining and extraction (minerals, metals, coal, gas, oil)
- ☐ 14 Packaging, graphics, printing
- ☐ 15 Paints, varnishes, coatings, adhesives
- ☐ 16 Petroleum refining, products, and processing
- ☐ 17 Photographic devices, optical instruments, and lenses
- ☒ 18 Plastics (resins, processes, equipment)
- ☐ 19 Pollution controls (gas, liquid, solid)
- ☐ 20 Pulp and paper, wood products, and processing
- ☒ 21 Rubber and plastic products, and processing
- ☐ 22 Soaps, detergents, cosmetics, toiletries
- ☐ 23 Stone, glass, clay products, and processing
- ☐ 24 Synthetic fibers (fiber production, processing, raw materials)
- ☐ 25 Textile products and processing
- ☐ 26 Transportation and lifting equipment (motor vehicles, aircraft and space, railroad, ships, hoists, conveyors)
- ☐ 27 Other

21. Do not submit this form unless it bears the original signatures of all contributors and witnesses.

22. After obtaining all required signatures, send the original *Disclosure of Invention*, with all attachments, to the Office of Research Services and Sponsored Programs, Polsky Bldg. Room 284, +2102.

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