Dr. Hassan Nikhnafs

Publications

1. Rasoul Moradi, Hassan Niknafs, Masoud Mehrizadeh. SPE-189051-MS, SPE Annual Caspian Technical Conference and Exhibition, 2017

Title: Produced Water Treatment by Using Nanofibrous Polyvinylidene Fluoride Membrane in Air Gap Membrane Distillation.

1. Rasoul Moradia, Mojtaba Shariaty-Niassar, Hassan Niknafs. Techno-Press, 2017, (Final review - Revise required).

Title: PVDF/h-BN hybrid membranes and their application in desalination through air gap membrane distillation.

1. International Journal of Computers and Fluids, Vol. 19, No. 1, 1991, P. 141-154

Title: Sharp monotonic resolution of discontinuities without clipping of narrow extrema

1991

1. Computational Fluid Dynamics Symposium on Aeropropulsio, NASA, Lewis Research

Center, USA; p 227-240. Title: Cost-effective accurate coarse-grid method for highly convective multidimensional unsteady flows.

1. Technical Report, NASA, Lewis Research Center, USA; NASA-TM-102538, ICOMP-

90-09, E-5336, NAS 1.15:102538 Title: A cost-effective strategy for nonoscillatory convection without clipping

1. International Conference on Numerical Methods in Fluid Dynamics, Williamsburg, VA,

USA; 11th; June 27-July 1, 1988 Title: Universal limiter for high order explicit conservative advection schemes

Patents

2014 Title: Regenerator Abstract: The present invention relates to a regenerator including a packed bed of energy storage elements made of a material having the following chemical analysis

Application No.: 20140158318

2014 Title: Structured Media and Methods for Thermal Energy Storage

Abstract: Thermal energy storage articles, systems, and methods for making and using such thermal energy storage articles and systems

Application No.: 20140074314

2014 Title: Low Void Fraction Thermal Storage Articles and Methods

Abstract: Low void fraction thermal energy storage articles, systems, and methods for making and using such thermal energy storage articles and systems

Application No.: 20140000835

2012 Title: Vessel Containing Fluid Distribution Media

Abstract: A vessel comprising a bed of randomly oriented ceramic media having fluid distribution channels incorporated in the outer surface of the media is disclosed

Application No.: 8282890

2011 Title: Vessel Containing Fluid Distribution Media

Abstract: A chemical processing apparatus that utilizes randomly oriented ceramic packing elements having at least three openings therethrough that accommodate feedstock with combustible and/or noncombustible matter that accumulates in the openings is described

Application No.: 7862013

2010 Title: Thermal Energy Storage Apparatus

Abstract: A thermal energy storage apparatus capable of storing large quantities of heat uses a plurality of energy storage zones having essentially the same thermal energy storage capacity per zone

Application No.: 20100287933

2010 Title: Vessel Containing Fluid Distribution Media

Abstract: A vessel comprising a bed of randomly oriented ceramic media having fluid distribution channels incorporated in the outer surface of the media is disclosed

Application No.: 20100209315

2010 Title: Packing Elements for Mass Transfer Applications

Abstract: The invention provides novel ceramic mass transfer packing elements with physical characteristics that maximize efficiency of mass transfer and minimize pressure drop when randomly dumped in a chemical reactor

Application No.: 7775507

2009 Title: Method for Forming a System for Treatment of a Flowing Material

Abstract: A system for treatment of one or more flowing materials includes a support bed (32) comprising a plurality of support elements (34)

Application No.: 20090283479

2009 Title: Bed Support Media

Abstract: A system for treatment of one or more flowing materials includes a support bed (32) comprising a plurality of support elements (34)

Application No.: 7566428

2009 Title: Packing Elements for Mass Transfer Applications

Abstract: The invention provides novel ceramic mass transfer packing elements with physical characteristics that maximize efficiency of mass transfer and minimize pressure drop when randomly dumped in a chemical reactor

Application No.: 20090115077

2008 Title: Packing Elements for Mass Transfer Applications

Abstract: This invention provides a packing element for use in a chemical processing apparatus housing a mass transfer reaction

Application No.: 20080164625

2008 Title: Packing Elements for Mass Transfer Applications

Abstract: A chemical processing apparatus that utilizes randomly oriented ceramic packing elements having at least three openings therethrough that accommodate feedstock with combustible and/or noncombustible matter that accumulates in the openings is described

Application No.: 20080093751

2007 Title: Ceramic Packing Element

Abstract: The invention provides an improved ceramic packing element (1, 6, 8) suited to use as a bed limiter having a generally uniform cross-section in the length (l) direction with the basic shape of a bow-tie and having a plurality of through passages (5) parallel to the length dimension (L)

Application No.: 7246795

2005 Title: Ceramic Packing Element

Abstract: The invention provides an improved ceramic packing element having the basic shape of a cylinder with an aspect ratio, defined by the diameter to length dimensions that is from 2.7 to 4.5

Application No.: 6889963

2004 Title: Ceramic Packing Element With Enlarged Fluid Flow Passages

Abstract: A ceramic packing element (1) has a polygonal structure (2) with a plane of symmetry in a direction defining a length (L) of the element and a greatest dimension (D) perpendicular to the length defining a diameter of the element

Application No.: 20040170804

2004 Title: Ceramic Packing Element for Mass Transfer Applications

Abstract: A ceramic packing element (10) has an essentially cylindrical structure (12) with a plane of symmetry in a direction defining a length (L) of the element and a greatest dimension (D) perpendicular to the length defining a diameter of the element

Application No.: 20040166284

2004 Title: Ceramic Packing Element

Abstract: The invention provides an improved ceramic packing element having the basic shape of a cylinder with an aspect ratio, defined by the diameter to length dimensions that is from 2.7 to 4.5

Application No.: 20040166284

2003 Title: Ceramic Packing Element

Abstract: The invention provides an improved ceramic bed limiter packing element having a uniform cross-section in the length direction with the basic shape of a bow-tie and having a plurality of through passages parallel to the length dimension

Application No.: 20030232172

2003 Title: Ceramic Packing Element

Abstract: The invention provides an improved ceramic packing element having the basic shape of a cylinder with an aspect ratio, defined by the diameter to length dimensions that is from 2.7 to 4.5

Application No.: 20030161992

2003 Title: Ceramic Packing Element

Abstract: The invention provides an improved ceramic packing element having the basic shape of a cylinder with an aspect ratio, defined by the diameter to length dimensions that is from 2.7 to 4.5

Application No.: 20030160342

2003 Title: Plastic Random Packing Element

Abstract: The invention provides a novel improved plastic packing element having the basic shape of a polygon with arches formed around the periphery by deforming the edge area in one direction and an area axially within the edge area to form archesprojecting in the opposite direction and providing an axially located aperture

Application No.: 20030146524

2001 Title: Packing Element

Application No.: D445029

2000 Title: Random Packing Element

Abstract: The invention provides a novel improved packing element having the basic shape of a polygon with arches formed around the periphery by deforming the edge area in one direction and an area axially within the edge area to form arches projecting in the opposite direction and providing an axially located aperture

Application No.: 6387534

1997 Title: Mass Transfer Packing Element

Application No.: D354687

1998 Title: Horizontal Regenerative Thermal Oxidizer Unit

Abstract: A regenerative thermal oxidizer unit comprising two heat regenerator units in which a gas to be purified from VOCs passes through the units in an essentially horizontal direction

Application No.: 5770162

1995 Title: Structured Packing Element

Application No.: D354687